

**HEALTH HUMAN RESOURCES SECTOR
DEVELOPMENT PROGRAM**
(LOAN 2642-2643 VIE & GRANT-0209 VIE)

INDEPENDENT COMPLETION REPORT

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29 June 2015

ABBREVIATIONS

ADB	–	Asian Development Bank
ALOS	–	average length of stay
AMS	–	Administration of Medical Services
AUN	–	ASEAN University Network
CME	–	continuing medical education
DBHI	–	Delivering Better Health Initiative
DFAT	–	Department of Foreign Affairs and Trade
DMF	–	design and monitoring framework
DoH	–	Department of Health
EA	–	executing agency
EM	–	ethnic minority
GEMAP	–	gender and ethnic minority action plan
GEMS	–	gender and ethnic minority strategy
GoA	–	Government of Australia
GoV	–	Government of Viet Nam
HHR	–	health human resource
HHRSDP	–	Health Human Resources Sector Development Program
HPTF	–	health professional training facility
HRD	–	human resource development
IMR	–	infant mortality rate
ICE	–	independent completion evaluation
JC-HRPM	–	Joint Committee for Human Resource Planning and Management
LET	–	Law on Examination and Treatment
M&E	–	monitoring and evaluation
MDG	–	Millennium Development Goals
MMR	–	maternal mortality rate
MoH	–	Ministry of Health
MPI	–	Ministry of Planning and Investment
MTR	–	mid-term review
PAM	–	project administration manual
PIU	–	project implementation unit
PMU	–	project management unit
PPMES	–	program/project performance monitoring and evaluation system
PPTA	–	project preparatory technical assistance
RRP	–	Report and Recommendations of the President
ToR	–	terms of reference
WFME	–	World Federation for Medical Education
WHO	–	World Health Organization
VDG	–	Viet Nam Development Goals
VRM	–	Viet Nam Resident Mission
VSS	–	Viet Nam Social Security

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EXECUTIVE SUMMARY

A. Background

1. The Health Human Resource Sector Development Program (HHRSDP) is a \$76.3 million initiative financed by a \$30 million program loan and \$30 million project loan from the Asian Development Bank (ADB), a \$AUD12 million grant from the Government of Australia (GoA) and \$5.3 million in counterpart funding from the Government of Viet Nam (GoV). The intended outcome of the HHRSDP is improved quality, efficiency and equity in health workforce and health service delivery. The combined program and project investments will contribute to achieving this outcome through outputs in three areas: (1) Better planning and management of human resources; (2) Higher quality human resources training; (3) Improved management systems in health service delivery. A series of policy deliverables linked to the program loan create regulatory and operational frameworks for interventions under each output area. The project loan and grant support implementation of interventions through investments in the Ministry of Health (MoH) and seventeen teaching institutions. The project loan and grant became effective on 6 January 2011. The physical completion date is 31 December 2015. The loan closing date is 30 June 2016. The termination date of the Grant Co-financing Agreement between the GoA and ADB is 01 July 2015. Following the requirements of the Co-financing Agreement, ADB commissioned an independent evaluation team to assess the Program against the OECD-DAC and GoA's evaluation criteria and produce an independent completion report. While the completion report is intended to provide an assessment of the performance of the overall Program, the primary focus is on the investments under the project loan and grant.

B. Outline of Evaluation Findings

2. **Relevance.** The HHRSDP is highly relevant to the human resource development (HRD) priorities of the GoV and the MoH, as articulated in the Government's Socio-Economic Development Strategies and sector specific plans. The HHRSDP at design was relevant to the GoA's then *Viet Nam Country Strategy 2007–2009*, a goal of which was to strengthen core elements of the Viet Nam health system that impact on service delivery. The HHRSDP built on Australia's comparative advantage in health workforce regulation and international education as well as earlier Australian investments in health financing reform. The Project is less relevant to the *Australia – Viet Nam Joint AID Program Strategy 2010-2015* under which Australia has disengaged from health sector investments. The HHRSDP remains relevant to the current strategic and operational priorities of ADB, which includes proposed financing (\$80 million) for a second phase of the Program.

3. **Effectiveness.** The HHRSDP was assessed as likely effective, with the caveat that at the time of the evaluation the Program had not reached physical completion, preventing a full assessment of effectiveness against the intended outcomes. The Program has delivered all but one policy action under the program loan and the majority of key outputs under the project loan and grant. These include: (i) The establishment of a Joint Committee for Human Resource Planning and Management (JC-HRPM); (ii) A uniform national system for registration and licensing of health practitioners and facilities; (iii) Equipment provision and facility upgrades in 17 Universities; (iv) A comprehensive program to strengthen capacity of teaching and management staff in 17 Universities, with all training targets met; (iv) Development of 26 costed care pathways. Several outputs that remain to be completed include the enhancement of the registration and licensing database and the piloting of case-based funding mechanisms, both of which are likely to be delivered in full if the Program is extended. The Program's outputs relating to university accreditation were considered overly ambitious. These were revised during implementation to a series of more achievable outputs that constitute preliminary steps towards the medium-term goal of accreditation. Outputs for the development of e-learning as a modality for the delivery of continuing medical education (CME) are less likely to be completed as intended.

4. **Efficiency.** Implementation of the HHRSDP was assessed as sub-optimal. The Project experienced significant implementation delays, specifically through project years 1-4. At the time of grant closing 60% of grant funding and 56% of total project funding had been disbursed. DFAT issued a no objection letter for the remaining grant contribution to be disbursed by project closing date. Forward projections estimate disbursements at 31 December 2015 as 99% for grant funds and 89% for total project funds. The sub-optimal implementation progress resulted from a combination of project related and institutional factors. Implementation experience from the HHRSDP highlights the inherent weaknesses of the project-based PMU model as a mechanism for investment delivery.

These weaknesses include: (i) Part-time leadership; (ii) The time lag from project inception to full implementation while systems are established and new staff learn procedures; (iii) High transaction costs; (iv) Lack of continuity between the PPTA and implementation teams. The successful delivery of the program loan under the HHRSDP demonstrates the potential gains to efficiency and effectiveness that can flow from a shift to more responsive modalities for investment financing and delivery.

5. **Impact.** Assessment of impact during the completion evaluation is premature. A minimum of six months of Program implementation remains. Impact indicators are based on 2020 targets.

6. **Sustainability.** Benefits from the HHRSDP are likely to continue post-Program with a number of key outputs assessed as likely sustainable. The registration and licensing system for health practitioners and facilities operates nationwide through uniform implementation mechanisms that are integrated within provincial health department structures. Nine universities provided with equipment under the grant and project loan have allocations for maintenance in annual operating budgets. The casemix database has provided a platform for linking the care pathways pilot to the broader work of the Technical Taskforce on Provider Payment Reform. The draft Standards for Accreditation for Medical Facilities constitute a foundation step towards the longer-term goal of medical university accreditation, which MoH is progressing through their World Bank financed program. Several outputs require further inputs to ensure sustainability. The JC-HRPM is supported by a Secretariat that has not been established as a formal unit of MoH and is assessed as less likely to be resourced post-project. Capacity building with teaching staff in 17 universities to impart modern teaching methods may require follow-up interventions in the workplace to support application of learning into practice. Benefits from the capacity strengthening for health workers in remote areas would be enhanced through the delivery of CME through e-learning, however this output is less likely to be completed.

7. **Gender.** Gender considerations were adequately incorporated at design with a social analysis undertaken and a Gender and Ethnic Minority Strategy developed. Implementation of the Strategy during project years 1-3 was inadequate. This reflected, in part, the overall delays in program implementation and a low awareness of the actions required under the Strategy amongst staff and consultants. At the time of the completion evaluation progress against the Strategy had improved with several of the Program's key gender targets met. With at least six months of implementation remaining, further progress against the remaining targets is assessed as being likely.

8. **Monitoring and Evaluation.** The Program's monitoring and evaluation (M&E) system was assessed as being less than adequate. The M&E system was not established until early 2014. This was due, in part, to inadequate allocation of resources for M&E in the investment budget. Review of the M&E system found limitations in the scope and quality of data collected. Reliable baseline data remains outstanding for a number of indicators. There was limited evidence at the program-level of the use of M&E data to inform management decision-making. Several examples of good practice in analysis and learning were identified at component level.

C. Outline of Recommendations

9. **HHRSDP Implementation.** Four main recommendations were made to inform ongoing HHRSDP implementation: (1) A 12 month implementation extension for the Program is recommended to allow the benefits of the investment to be realized in full; (2) Planning capacity within the Program should be reviewed to ensure adequate systems, tools and personnel are in place to support efficient implementation during the remaining implementation period; (3) The Program's final evaluation should provide a more in-depth assessment of the Program's outcomes to capture the full benefits of the investment; (4) Systems for knowledge management should be implemented to ensure the transfer of outputs, products and learning from the Program to the MoH at completion.

10. **Future Programming.** Three main recommendations were made to inform future programming: (1) Future investments in health HRD should move away from discrete project investments and be delivered under the umbrella of a sector-wide program, with health HRD as a core programming pillar; (2) The MoH should consider establishing a single full-time PMU responsible for overseeing the portfolio of ADB investments in the health sector; (3) Future investment in the registration and licensing system, the accreditation of CME programs and the development of modalities for CME delivery is warranted to consolidate the achievements under the HHRSDP. Future investment in provider payment reform is also warranted but should be developed under the umbrella of a health financing program rather than health HRD.

D. Evaluation Criteria Ratings

Criteria	Rating ^a
Relevance	5
Effectiveness	4
Efficiency	4
Impact	Not evaluated
Sustainability	5
Gender Equality	4
Monitoring & Evaluation	3

Note: ^a Rating is based on a scale of 1-6. The evaluation criteria rating scale is attached in Appendix 1, Table 1.2

I. INTRODUCTION

A. Activity Background

11. The Health Human Resource Sector Development Program (HHRSDP) is a \$76.3 million¹ initiative financed by a \$30 million program loan and \$30 million project loan from the Asian Development Bank (ADB), a \$AUD12 million grant from the Government of Australia (GoA) and \$5.3 million in counterpart funding from the Government of Viet Nam (GoV). The HHRSDP supports the GoV to carry out key reforms in governing public and private health staff and facilities, health human resource development and management, and hospital financing. The program loan supports key policy actions to implement the Law on Examination and Treatment² (LET) governing the registration and practice of health professionals, upgrading teaching institutions, and improving hospital financing. The project loan and grant support investments directly linked to implementation of the program level policy actions in key institutions including the MoH and teaching institutions.

12. The intended impact of the HHRSDP is improved health status of the population and progress towards the health Millennium Development Goals (MDGs)/Viet Nam Development Goals (VDGs), especially amongst the twenty poorest provinces in Viet Nam. The Program's outcome is improved quality, efficiency and equity in health workforce and health service delivery. The program loan and project investments contribute to the following three outputs and major products/reforms:

Output 1: Better planning and management of human resources including: (i) Stronger human resources policy, planning, and implementation through the establishment of a joint committee on health human resources (HHR); (ii) A report on reform, planning, and management of the health workforce; (iii) Establishment of a registration system for certification and licensing of health professionals.

Output 2: Higher quality human resources training including: (i) A master plan for developing the training network; (ii) Improved capacity of teaching institutions; (iii) Accreditation and other mechanisms for quality assurance; (iv) Rotation of medical specialists to lower-level hospitals; (v) Increasing access to training and education for ethnic minorities and women; (v) Support for rural and remote health workers.

Output 3: Improved management systems in health service delivery including: (i) Increased government spending on health; (ii) Piloting clinical care pathways; (iii) Testing case-based funding mechanisms for more efficient hospital financing.

The Program design structure and performance targets are detailed in the Design and Monitoring Framework (DMF) in Appendix 2, Table 2.1.

13. The GoA's investment in the HHRSDP builds on earlier investments under the Developing Better Health Initiative (DBHI). Phase 1 of the DBHI, implemented between 2007 and 2009, focused on small, strategic engagement to strengthen the GoV's capacity to coordinate the health sector, regulate the health workforce and reform health financing. Phase 2 of the Initiative includes funding for the HHRSDP.

14. The project loan and grant became effective on 6 January 2011. The physical completion date for the HHRSDP is 31 December 2015. The loan and grant closing date is 30 June 2016, as specified in the Loan and Grant Agreements between ADB and the GoV. The GoA's grant investment in the HHRSDP is delivered through a Co-financing Agreement with ADB that terminates on 01 July 2015. The reason for the discrepancy in the closing dates of the Grant Agreement and Co-financing Agreement was not apparent to the ICE team.

¹ In this report \$ refers to USD unless otherwise stated.

² Law No.40/2009/QH12 dated 23/11/2009.

B. Evaluation Objectives and Questions

15. The Independent Completion Evaluation (ICE) of the HHSRDP is intended to provide an assessment of the Program's performance against the following OECD-DAC and GoA evaluation criteria:

- 1) Relevance - is this still the right thing to do?
- 2) Effectiveness - are we making the progress we expected at this point in time?
- 3) Efficiency - is the investment making appropriate use of Australia's and ADB's time and resources to achieve objectives?
- 4) Impact - what positive and negative changes were produced by the initiative, directly or indirectly, intended or unintended?
- 5) Sustainability - to what extent will benefits endure after Australia's and ADB's contribution has ceased?
- 6) Monitoring and evaluation - is the monitoring and evaluation system being used to effectively measure implementation progress and progress towards meeting expected outcomes?
- 7) Gender - how do we respond to gender equality concerns and are we doing it well?
- 8) Analysis and learning - identify key lessons learnt from the Program that will inform ADB's future engagement in the health sector in Viet Nam.

16. Within the framework of the above-mentioned evaluation criteria the ICE will pay particular attention to the following topics as specified in the terms of reference (ToR) for the ICE:

- The extent to which the Program achieved its objectives.
- Identify and highlight lessons/achievements that may have wider implications/interest for the GoV, ADB or the GoA.
- Assess the contribution of the Program to achieving the objectives of MoH's Health Human Resource Strategy.
- The management and technical quality of in-country: (i) planning and management of health human resources; (ii) health human resources training; (iii) management systems in health service delivery.
- The effectiveness and long-term sustainability, ownership, capacity and resources of the GoV to maintain the activity outcomes after ADB and Australian Government funding have ceased.

C. Evaluation Team and Evaluation Methods

17. The evaluation team comprises of Alistair Briscoombe, Team Leader/International Specialist and Nguyen Thanh Hai, National Evaluation Specialist. The period for the evaluation is 18 May – 26 June 2015. The evaluation methodology comprised the following stages:

- 1) Document review including PPTA reports, Program Feasibility Study, Project Administration Manual (PAM), Aide Memoires from all ADB missions, reports of the Monitoring and Evaluation (M&E) Consultants, annual plans and other operational documents of the Program, technical documents of each component, and relevant policies and strategies of the GoV, GoA and ADB.
- 2) Analysis of existing M&E data sets and liaison with teams from each component to generate additional data as required (due to the limited time period for the ICE it was not feasible for the ICE team to collect detailed primary data).
- 3) Consultation with key stakeholders including: (i) Representatives of ADB and the Department of Foreign Affairs and Trade (DFAT); (ii) Members of the Project Management Unit (PMU) including the Project Director and other managing committee members, PMU staff and consultants; (iii) Representatives from relevant Departments within the MoH; (iv) Representatives from Project Implementation Units (PIU), Provincial Departments of Health (DoH) and hospitals participating in the care pathways pilot.
- 4) Site visits to Thai Binh and Hue to verify data collected.
- 5) Feedback from stakeholders on the draft report prior to completion.

18. A list of persons met by the ICE team is provided in Appendix 14, Table 14.1.

D. Limitations to the Evaluation

19. There are two key limitations to the ICE. The primary limitation stems from the non-alignment of the closing date for the Grant Co-financing Agreement (30 June 2015) and the Project Loan Agreement (30 June 2016). At the time of the ICE the Program had not reached physical completion, with six months of implementation remaining and the possibility of a further twelve months should an extension to the Program, currently under consideration, be approved. A number of activities to which the Program's key outputs and outcomes are linked remain underway.

20. A second key limitation was the lack of baseline data and robust M&E data available to the ICE team. As detailed in Section II.E, the Program's monitoring and evaluation system was established in 2014, three years after program inception. Baseline data was collected retrospectively and remained incomplete at the time of the ICE. Data from the Program's M&E system lacked the scope, completeness and quality required by the ICE team. The collection of endline evaluation data has not yet been scheduled. To overcome this limitation the ICE team worked with staff and consultants from each Program component to generate additional data as required.

E. Terminology used in the ICE Report

21. While the ICE is intended to provide an assessment of the performance of the overall 'Program', the primary focus of the evaluation is on the investments under the project loan and grant. In this regard the terms "Program" and "Project" are used interchangeably in the report. As a rule the term Program is used when referring to the HHRSDP as a whole. The term Project is used in discussions pertaining to the project loan and grant investments.

II. PROGRAM EVALUATION

A. Relevance

I. Relevance to the Development Priorities of the GoV

22. The HHRSDP is highly relevant to the GoV's central policies for human resource development (HRD). As outlined in the Viet Nam Socio-Economic Development Strategy 2011-2020 and the Viet Nam Manpower Development Master Plan (2011-2020) the Government aims to increase the trained workforce from 20 million in 2010 to 44 million by 2020, have over four universities and ten vocational training schools meeting international standards and 30 per cent of university lecturers with doctorate degrees by 2020. Investments under the HHRSDP in postgraduate training of staff in health professional training facilities (HPTF) and strengthening accreditation of processes within HPTF will contribute to achieving these targets.

23. The HHRSDP is similarly relevant to the sector priorities of the MoH. Human resource development remains a priority focus of the sector. The National Health Sector Development Plan 2011-2015 includes, as one of eight strategic objectives, to promote human resource quantity and quality. Priority areas for action are set out in the Master Plan for Developing Health Human Resources for the Period 2012-2020.³ Activities under the HHRSDP are consistent with the Master Plan and support MoH in delivering the Plan's key outputs. The HHRSDP is further relevant in supporting MoH's efforts to strengthen the quality of human resources through the registration and licensing of health professionals and health facilities as required under the LET.

24. The HHRSDP Component 3, which focuses on improved management systems in health service delivery through: (i) Piloting care pathways to organize clinical work, and (ii) Introducing and testing case-based funding mechanisms, is less closely linked to the HRD priorities and strategies of the MoH. However, outputs under this component are consistent with the policy directions on health financing reform outlined by the GoV in Decree No. 85/2012/ ND-CP⁴ and feed into the current work on health financing being implemented by the Department of Planning and Finance of the MoH.

II. Relevance to the Aid Investment Strategies of the GoA

25. The HHRSDP at design was relevant to the GoA's then Viet Nam Country Strategy.⁵ A goal of this Strategy was to strengthen core elements of the Viet Nam health system that impact on service delivery, with the specific objective of improving the management, financing and coordination of the health sector.⁶ Investments at the time included those under phase I of the DBHI.

26. The Project is less relevant to the GoA's current Viet Nam Country Strategy⁷ under which Australia has disengaged from health sector investments to focus on the core areas of human resource development, economic integration, and environmental sustainability. While the Strategy recognizes the GoV's wider development goal of meeting human resource needs associated with progression to an industrialized country by 2020, the GoA's contribution is more narrowly focused on improving the quality of Viet Nam's human resources through scholarships and increasing links between public sector institutions. Nonetheless, investments under the HHRSDP for postgraduate training and strengthening accreditation of processes within HPTF will contribute the GoV's wider development goal.

3. Investments under the HHRSDP built on Australia's comparative advantage on several levels. Exposure of MoH policy makers to Australia's experience in health workforce regulation culminated in MoH drawing on Australian technical inputs to support the development of policies for the registration and licensing of health professionals and health facilities. Australia's comparative advantage in the education sector has been drawn on to support strengthening of internal quality assurance processes

³ Decision 816/BYT dated 16/03/2012.

⁴ Decree No. 85/2012/ ND-CP dated 15.10/12 concerning the operational and financial mechanisms for public health facilities and prices applied for health care services and treatments in public health facilities.

⁵ *Viet Nam Country Strategy 2007–2009*.

⁶ AusAID. *Viet Nam Development Cooperation Report 2009*, October 2010.

⁷ *Australia – Viet Nam Joint AID Program Strategy 2010-2015*.

within HPTF, setting the foundation for future efforts by medical teaching institutions to gain international accreditation. Investments in testing case-based funding mechanisms under the HHRSDP built on the accomplishments of earlier Australian investments under the DBHI to pilot approaches for health financing reform.

III. Relevance to the Investment Strategies of the ADB

27. The HHRSDP at design was consistent with ADB's Long Term Strategic Framework⁸ and its complimentary Operational Plan for Health,⁹ which emphasize selective health sector engagement in key strategic support areas including improved human resources for health. The HHRSDP was included in ADB's country operations business plan 2010– 2012.¹⁰ Investments under the HHRSDP in health training institutions, health workforce development, and the strengthening of planning and governance of health public expenditure remain relevant to ADB's current strategic priorities. ADB's Operational Plan for Health for 2015-2020 includes three focus areas: (i) Health infrastructure, (ii) Health sector governance and regional public goods, and (iii) Health financing. Future ADB engagement will target supply side constraints to health service delivery and health workforce and enhance demand side through support to health financing reform.¹¹ ADB's current Health Results Framework includes: (i) A proposed Project Preparatory Technical Assistance (PPTA) for a second phase of the HHRSDP; (ii) HHRSDP Phase 2 (estimated at \$80M).

IV. Overall Assessment

28. The ICE team scored the HHRSDP's overall rating for relevance as 5. Ratings for individual relevance sub-criteria are listed in Appendix 1, Table 1.1.

⁸ ADB. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008-2020*. Manila, 2008

⁹ ADB. *Operational Plan for Improving Health Access and Outcomes Under Strategy 2020*. Manila, 2009

¹⁰ ADB. *Country Strategy and Program Midterm Review: Viet Nam 2007–2010* (Appendix 4: Indicative Rolling Country Operations Business Plan 2010 –2012). Manila, 2010

¹¹ *Summary of ADB Assistance to Viet Nam's Health Sector* (Draft). 2015.

B. Effectiveness

29. Assessment of effectiveness provides a measure of achievement against the intended objectives of the investment. As noted in the methodology section, assessment of effectiveness of the investment under the HHRSDP is limited by the fact that the Project has not reached physical completion and that the collection of endline evaluation data has not yet been scheduled. Within this context the ICE team have implemented three key steps to assess effectiveness:

- (i) A synthesis of data currently available for each of the output and outcome targets detailed in the Project's DMF.
- (ii) An analysis of current progress against key activities to assess the likelihood of outputs being delivered by the Project's physical completion date (31 December 2015) or within a 12-month project extension period.
- (iii) Drawing on the analysis in steps (i) and (ii), assess the likelihood that the HHRSDP will achieve its stated outcomes by Project completion

30. A summary of achievements against the DMF targets for outcomes and outputs is attached in Appendix 2, Table 2.1.¹²

I. Project Outcomes

31. The intended outcome of the HHSRPDP is improved quality, efficiency and equity in health workforce and health service delivery. The Project has five outcome targets, progress against which is discussed below.

Target 1: By project completion at least 50% of doctors and nurses practicing in public facilities registered and licensed.

32. At the time of the ICE the outcome target for the percentage of doctors and nurses registered and licensed had been significantly exceeded. There are presently 229,939 health practitioners, representing 91% of the estimated number of practitioners nationwide, who are registered under the licensing database. This includes 54,785 doctors and 87,649 nurses within 822 public facilities.¹³ Data on health practitioner registration by occupation is detailed in Appendix 5, Table 5.1.

33. A registration and licensing system that regulates the quality of medical examination and treatment within health facilities was recognized as a necessary reform under the LET. The ICE team assessed that outputs from the Project investment have contributed significantly to creating the regulatory framework and implementation structures for the establishment and operation of this system. The outcome data on registration coverage demonstrates the scale of system rollout and the scope of the Project's achievements. Ongoing work to enhance the system and update the regulatory framework will consolidate these achievements, providing an important mechanism for improving the quality, efficiency and equity in health workforce and health service delivery.

Target 2: At least 50% of doctors and nurses practicing in public facilities participating in accredited continuing education programs (50% women).

34. The ICE team used data on practitioner licensing from the registration system as a proxy measure of current levels of participation in CME by medical and nursing staff. Compliance with the CME requirement under Circular 22¹⁴ is a pre-requisite for the issuance of a practitioner license. At June 2015 54,785 doctors and 87,649 nurses within 822 public facilities had demonstrated compliance with the requirement for CME at the time of registration.¹³

35. The ICE team assess that the Project's investment in developing the regulatory and delivery mechanisms for CME will contribute to improving quality, efficiency and equity in health workforce and health service delivery. Circular 22, developed as a policy commitment under the program loan,

¹² The revised DMF contained in the Project Administration Manual dated 25 March 2015 is used as the basis of this assessment.

¹³ The outcome data could not be presented as a percentage as denominator data on the total number of doctors and nurses in public facilities was not available.

¹⁴ Circular 22/2013/TT-BYT dated 09/08/2013.

provides the regulatory basis for CME.¹⁵ The system for registration and licensing of health professionals serves as a mechanism for regulating practitioners' compliance with CME requirements. Delivery of CME has been strengthened through capacity building with HPTF staff and the development of initial e-learning modules, however the objective of developing a comprehensive and integrated e-learning system as a modality for the delivery of CME may not be achieved. The accreditation of CME courses is ongoing work to be developed under MoH's HRD project with the World Bank.¹⁶

Target 3: At least 240 health professionals per year for 3 years from central and provincial level institutions have done placements in rural and underserved areas.

36. The Project's M&E system captures data on the annual number of health professionals undertaking placements in rural and remote areas following Decision 1816/QD-BYT. The numbers for 2013 and 2014 were 1,037 and 1,012 respectively, exceeding the Project's outcome target.

37. The rotation of specialist medical staff through lower-level hospitals and commune health centers under Decision 1816 boosts the availability and quality of local health care in remote and mountainous areas and supports skills transfer to local health care staff. As a policy action under the program loan, MoH undertook an assessment of the implementation of Decision 1816 and made recommendations for strengthening implementation. The Joint Committee for Human Resource Planning and Management (JC-HRPM), which receives operational support under the project loan, provides a mechanism to strengthen coordination and management of activities under Decision 1816, including the rotation program. Progress against the outcome indicator demonstrates that the rotation program is operating beyond the levels that were envisaged at design.

Target 4: 10% increase in number of Ethnic Minority students graduating from six prioritized medical universities over baseline level.

38. The ICE team was unable to assess progress against this indicator in full due to a lack of pre-Project baseline data. Data on the average number of EM students enrolled at HPTF during the Project period (2011-2014) was available. An average of 10,783 EM students were enrolled annually at the 17 HPTF combined, with 7,867 enrolled at the six priority universities. Data on enrolment numbers for individual HPTF is detailed in the DMF in Appendix 2, Table 2.1.

39. Increasing the number of qualified health professionals from EM backgrounds is an important strategy for improving the quality, efficiency and equity of the health workforce and health service delivery in remote areas, particularly those areas with large EM populations. The ICE team assess that the Project's investments have partially contributed to this. The most direct evidence is the 51 health professionals from an EM background who received scholarships to study Medical Specialization Level 1. The effects of the Project's other key activity, the provision of top-up scholarships for 2,280 EM students already enrolled in HPTF, are less direct. While the scholarships do not increase the number of new enrollees, the additional funding supports retention of these students through to graduation. The final evaluation should be used to better capture and quantify the direct and indirect contributions of the Project in increasing the number of EM students graduating from HPTF and the proportion that return to work in rural and remote areas.

Target 5: 20 hospitals with improved efficiency and quality of services through adoption of operational policies for use of care pathways and case-based payments.

40. The piloting of case-based payments using costed care pathways (CPs) has not yet commenced. Despite this, the ICE team assess that the outputs to date have established the foundation for progressing to the pilot. It is anticipated that an additional 9-12 months are required to complete this work, which is likely to be achieved if an extension to the project implementation period is approved.

¹⁵ Health professionals are required to undertake 48 hours of CME every two years with an accredited provider.

¹⁶ The Health Professional Education and Training for Health System Reforms Project.

41. An important output of the Project has been the development of the casemix software and database. On a project level this has provided the methodological platform for costing the 26 CPs. On a wider level the database has provided a platform for drawing together the MoH's work on other DRG related initiatives. It represents an important output of the Project and one that will support the wider work of the Ministry's Technical Taskforce on Provider Payment Reform. The Project's final evaluation, in assessing outcomes, should attempt to capture the broader work on provider payment reform that the HHRSDP has contributed to.

II. Program Outputs

42. Tranche releases of the program loan were conditional on the MOH delivering a series of reforms through key policy actions. Policy actions for the tranche one release included: (i) Passing of the LET; (ii) Establishing a JC-HRPM within MOH; (iii) Developing of a Master plan for teaching institutions; (iv) Approval of a pilot study on case-based provider payment linked to care pathways. The policy conditions were achieved and the tranche one program loan released on 4 March 2011. The first tranche of the program loan totaling \$15.8m was released to the Universities in December 2012 and March 2013.¹⁷

43. The tranche two release, due on 31 December 2012, was conditional on ten additional policy actions. The actions are detailed in Appendix 3, Table 3.1. The GoV requested ADB to postpone the second tranche release until 30 September 2013 to allow completion of all ten actions. On 26 June 2013 the MoH submitted documentation detailing compliance with nine of the policy actions and a request for a partial waiver of one action related to the benchmarking and costing of 20 CPs.¹⁸ ADB found that MOH had made significant progress in undertaking a set of complex reforms and approved the second tranche release on 27 November 2013. The release included a partial waiver of policy action 9, with the caveat that it be completed under the project loan by the end of 2015. The second tranche of \$15.48m was released to Universities in December 2014.¹⁹ ADB's assessment of MoH's compliance with the tranche two policy actions is detailed in Appendix 3, Table 3.1.

III. Project Outputs

Output 1: Better Planning and Management of Human Resources

Component 1 comprises two sub-components: (i) *1A: Stronger human resources policy, planning, and implementation*; (ii) *1B: Established systems for the registration and licensure of health professionals*. Component 1 has made significant progress toward achieving the intended outputs. At the time of the ICE²⁰ 58% and 72% of planned activities under sub-components 1A and 1B respectively were on target for completion by 31 December 2015.²¹ The component has produced a number of important outputs, specifically with respect to establishing a registration and licensing system for health professionals and health facilities.

1A Stronger human resources policy, planning, and implementation

44. **HRD planning and coordination.** MOH established the JC-HRPM as a tranche one policy commitment,²² and issued several subsequent decisions to strengthen the Committee's functioning.²³ The Committee serves as a focal point for human resource management and development within the

¹⁷ Source: PMU Financial Management Consultant. The total of \$15.8m exceeds the loan amount of \$15.0m due to exchange rate fluctuations.

¹⁸ MoH noted that the ninth policy action is difficult to achieve given the time frame within which compliance is required and made a commitment to complete this policy action under the project loan.

¹⁹ Source: PMU Financial Management Consultant. The total of \$15.48m exceeds the loan amount of \$15.0m due to exchange rate fluctuations.

²⁰ 15 May 2015.

²¹ Aide Memoire. ADB Review Mission. May 18-22.

²² Decision 1301/QD-BYT date 21/4/2010 concerning the Establishment of the Joint Committee for execution of Health Human Resource Development for period 2010-2015.

²³ Decision No 1283 QD-BYT dated 20/4/2012 and Decision No 3651 QD-BYT date 16/9/2014, concerning Strengthening the Committee for the Execution of Health Human Resource Development.

Ministry and has delivered a number of key strategic outputs to strengthen health human resource development.^{24 25 26 27} The project supported operation of the Committee through resourcing a Secretariat. Several members of the Secretariat sit on the Health Partnership Group's Technical Working Group for HRD ensuring linkages between the JC-HRPM and wider donor community. The Secretariat has not been established as a formal unit of MOH. Mechanisms to support the continued operation of the Secretariat will be required to ensure the functionality of the JC-HRPM post-project. This is discussed further in Section II.E.

45. **Strengthen HRD capacity.** The Project is likely to exceed its target for postgraduate training to support improved planning and management of human resources. A total of 52 health sector staff (target 36) are enrolled in postgraduate training, comprising 44 candidates in HR Management and 8 candidates HHR Planning and Policy Development. PMU noted a difficulty in finding appropriate candidates for post-graduate training in HHR Planning and Policy Development due to the entry requirements of courses, with resources being reallocated to other postgraduate programs. Training outputs by gender are detailed in Appendix 4, Table 4.1.

1B Established systems for the registration and licensure of health professionals

46. **Regulatory framework and implementation structures.** The Project has supported the AMS²⁸ to develop the regulatory environment for operationalizing key Articles under the LET concerning the registration and licensing of health professionals and health facilities. Outputs include:

- Circular No. 41/2011/TT-BYT (14/11/2011) specifying the criteria and processes for granting certificates to medical practitioners and operating licenses to health care facilities.²⁹
- Circular 35/2013/TT-BYT (30/10/2013) on the revocation and suspension of licenses.
- Circular No. 22/2013/TT-BYT (09/08/2013) detailing the requirements for continuing medical education amongst health professionals.
- Circular 30/2014/TT-BYT (28/8/2014) concerning humanitarian examination and treatment.

47. Implementation structures for the registration and licensing system have been established at national and provincial levels following the requirements of Circular 41. The system is depicted in Appendix 5, Diagram 5.1.

48. Under the guidance of the Vice Minister the AMS, with support from the project team, are undertaking a policy review to determine required amendments to the LET and Decree 87³⁰ and the development of a new circular superseding Circular 41. The review is being informed by lessons from the Provincial DoHs, with a specific focus on identifying regulations under the various Decrees and Circulars that are unworkable and serving as blockages to effective system operation. A policy specialist from Australia is providing technical inputs to the AMS and PMU as part of the review.^{31 32}

²⁴ Policy Action 1: Report on HHR Reform, Planning and Management. May 2013

²⁵ Decision 816/2012/BYT (16/03/2012) approving the 'Plan for Health Human Resource Development 2012-2020.'

²⁶ Decision 319/2013/QĐ-TTg approving a plan for training and development of human health sector workers in key under-resourced specialties of tuberculosis, leprosy, mental health, forensics and pathology for the period 2013-2020.

²⁷ Aide Memoire. Mid Term Review Mission, September 2013: Other outputs include Decisions on reducing hospital overcrowding, promoting health care on islands and in coastal regions, a roadmap for universal health coverage, encouraging specialization in less popular specialties, secondment of staff, health promotion, HIV/AIDS, food safety, and population and reproductive health.

²⁸ MoH has established the a new Department on Registration and Licensing within the Administration of Medical Services

²⁹ Circular 41 was a tranche two policy action supported under the program loan

³⁰ Decree 87/2011/ND-CP providing broad guidance on the interpretation of articles within LET for implementation purposes. It includes a timetable for the registration of private and public practitioners and facilities.

³¹ The engagement of a Policy Specialist (Health Workforce regulation) from the Victorian Department of health and Human Services following a project study tour is an example of Australia's value to add the strengthening of the LET and the establishment of the registration and licensing system.

49. **Capacity development.** A national training plan for provincial staff involved in health professional certification was developed as a policy action under the program loan.³³ The Project supported the AMS to roll out the training plan with the following outputs: (i) 821 registration & licensing staff trained in system processes (National Plan Target: 1050); (ii) 2446 key staff of hospitals in 63 provinces trained on registration (National Plan Target: Nationwide). Training outputs by gender and EM status are detailed in Appendix 4, Table 4.1.

50. **Registration and licensing database.** The Project is supporting the AMS to develop a registration and licensing database over two phases. Phase 1 involved the development of an interim system comprising one core module for licensing of individual practitioners. The Project provided software, equipment and training to support system operation to the central level and 63 provinces. Official operation of the interim system commenced in March 2013³⁴ and served as a piloting exercise to test the databases functionality and operational efficacy. Based on the success of the pilot it was decided to utilize the interim database as the core system with phase 2 focused on enhancing the system's functionality. A consulting firm³⁵ was engaged in April 2015 to build seven additional modules for the core system.³⁶ The enhancement will address operational limitations previously noted by ADB and DFAT, including the need for: (i) A renewal requirement to replace the current one-time lifelong registration; (ii) An automated mechanism for lodging of complaints. The enhanced system is scheduled for completion in December 2015.

Output 2: Higher Quality Human Resources Training

51. Component 2 comprises three sub-components: (i) *2A: Stronger capacity of teaching institutions*; (ii) *2B: Stronger mechanisms for quality improvement and assurance*; (iii) *2C: Stronger staff training and utilization in remote areas*. During implementation PMU and the Administration of Science, Training and Technology (ASTT) found the scope of sub-component 2B to be overly ambitious and that revision of the output targets relating to accreditation of HPTF was required.³⁷ The ICE team concurs with this view, noting accreditation of medical universities in Viet Nam is a medium term goal requiring a phased approach based on a clear road map and key milestones. The ASTT reported that outputs under sub-component 2B were revised during the MTR to: (i) Conducting a survey to assess the current conditions for accreditation in HPTF; (ii) Develop and pilot a set of Standards for Accreditation for Medical Facilities; (iii) Strengthen Systems for Internal Quality Assurance for HPTF. The ICE team found no documentation from ADB approving this change in scope.

52. At the time of the ICE, 95% of Component 2 activities were on target for completion by 31 December 2015.³⁸ The ICE team assessed that, with an extension to the project completion date, most of the output targets specified in the DMF and Project Training Plan³⁹ are likely to be achieved with the exception of the e-learning activities. The ICE team assessed these as less likely to be completed as intended based on current progress and the absence of institutional policy and frameworks within the HPTF to guide the development of e-learning courses.

³² This work includes the development of standardized approach to determining Scope of Practice when issuing practice certificates (as required under article 25 of the LET).

³³ Plan 1439/KH-BYT for National Training on Health Professionals Licensing and Relicensing for the period 2013 to 2015, approved by MoH 28 December 2012.

³⁴ Official Letter No. 1356/BYT-KCB on 3/15/2013 instructing the use of the registration and licensing database by all 63 provinces.

³⁵ National Firm for Enhancement of the National Registration and Licensing System.

³⁶ The modules cover: (i) Online registration for medical facility licensing; (ii) Functional requirements for linking health human resource management at medical service facilities; (iii) Patient complaints and feedback; (iv) Management of Continuous Medical Education for practitioners; (v) Online registration for certification of health professionals; (vi) Integrated certification and licensing management; (vii) Functional requirements for data analysis and reporting.

³⁷ The intended outputs under sub-component 2B were (i) Six prioritized universities met national teaching quality accreditation standards; (ii) Three courses in each prioritized training institutions accredited under continuing education system.

³⁸ Aide Memoire. ADB Review Mission. May 18-22.

³⁹ Appendix 3 of the PAM.

2A Stronger capacity of teaching institutions

53. **Strengthened teacher and management capacity within HPTF.** The Project has delivered a comprehensive program to strengthen capacity of teaching and management staff within the 17 HPTF, incorporating both long and short-term training programs. The DMF target of 600 university teachers (40% women) trained in modern teaching methods will be exceeded. The Project has supported: (i) 112 teaching staff (67% female) for postgraduate training in basic science, nursing and management (Masters and PhD); (ii) 1,191 teaching staff (61% female) for short term training on basic-science & pre-clinical skills-lab teaching methods; (iii) 39 teaching staff (54% female) for short term training on competency-based learning methods; (iv) 1,264 teachers, managers and clinicians for short term training on techniques for practical clinical training of students (59% female; 15 EM). An additional 517 facility managers (50% female) participated in short-term training to improve management skills. Training participant numbers against the output targets in the Project Training Plan, disaggregated by gender and EM status, are detailed in Appendix 4, Table 4.1.

54. Teaching capacity was further developed through international study tours and in-country exchange programs between staff of HPTF. In total: (i) 135 teaching staff (53% female) participated in study tours to facilities within the ASEAN region on topics relating to teaching and practical learning for basic sciences, primary health care, e-learning and HPTF management; (ii) 253 teaching staff (52% female) participated in study tours and teacher exchanges within Viet Nam. Study tour participant numbers by gender and EM status are detailed in Appendix 4, Table 4.1.

55. **HPTF with upgraded teaching laboratories and equipment.** The Project supported the renovation of laboratories in 17 HPTF, exceeding the DMF target of six facilities. The upgrades supported a functional space for locating new equipment procured under the HHRSDP and an enhanced working environment for students and teachers. A summary of works in each facility is provided in Appendix 6, Table 6.1.

56. Nine HPTF received equipment under the project loan.⁴⁰ Equipment was procured in three phases with a total of 28 packages.⁴¹ Building of equipment lists followed a consultative process with the HPTF. The timeframe from list building to equipment delivery averaged 15 months. Grant funding was used to finance three packages under the Phase 2 of procurement - Pathology Practice Equipment (EQ13); Biochemistry, Immune Laboratory Equipment (EQ15); LCMSMS/ ESI/APCI System Equipment (EQ18). Equipment procured, by phase and beneficiary HPTF, is detailed in Appendix 8, Tables 8.1, 8.2 and 8.3.

57. **E-Learning.** The project sought to develop an e-learning network with a virtual medical training resources library as a mechanism for the modern delivery of curricula to students and as a modality for the delivery to CME to health professionals. At the time of the ICE output targets for e-learning had not been achieved. Specifically: (i) Only 25% of the target for training of trainers on e-learning had been reached, with 50% achievement expected by 31 December 2015; (ii) Five e-learning courses had been developed and 30 were in development against a target of 150; (iii) The virtual medical training resources library, which will consist of 5,000 e-books and 30,000 magazines on medical sciences, was under construction with the opening date anticipated as June 2016.

2B Stronger mechanisms for continuous quality improvement and assurance

58. **Revised scope.** The intended outputs under sub-component 2B were: (i) Six prioritized universities met national teaching quality accreditation standards; (ii) Three courses in each prioritized training institutions accredited under continuing education system. These outputs will not be achieved. The project has delivered three key outputs that will support the MoH and MOET in moving forward on accreditation: (i) Conducting a survey to assess the current conditions for accreditation within HPTF; (ii) Develop and pilot a set of Standards for Accreditation for Medical Facilities; (iii) Strengthen Systems for Internal Quality Assurance for HPTF.

40 1. Hanoi Medical University; 2. Ha Noi Pharmacy University; 3. HCM Medical and Pharmacy University; 4. Can Tho Medical and Pharmacy University; 5. Thai Binh Medical and Pharmacy University; 6. Haiphong Medical and Pharmacy University; 7. Nam Dinh Nursing University; 8. Hai Duong Pharmacy College; 9. Da Nang Medical and Pharmacy Technical University.

⁴¹ The final 8 packages under phase 3 have been contracted with completion expected in September 2015.

59. **Survey in HPTF.** MOET has issued a set of 10 standards and 61 criteria for use in University accreditation in Viet Nam.⁴² The standards contain no specific criteria relevant to medical training facilities. A survey was conducted in 9 HPTF⁴³ with the objectives of: (i) Assessing each facility's compliance to the MOET standards; (ii) Identifying additional criteria specific to the accreditation of medical schools, for inclusion in a set of draft Standards for Accreditation for Medical Facilities.

60. **Develop and pilot standards for accreditation of HPTF.** Draft Standards for Accreditation for Medical Facilities were developed based the 10 standards issued by MOET with the following modifications to the 61 MOET criteria: (i) 35 of the 61 criteria were revised to be specific to medical education; (ii) 12 new criteria were established; (iii) 14 criteria remained unchanged.⁴⁴ ⁴⁵ Following drafting the Standards for Accreditation for Medical Facilities were piloted in 4 universities.⁴⁶ The pilot demonstrated that the draft Standards were more appropriate for assessing HPTF than the current Standards issued by MOET.

61. The draft Standards for Accreditation for Medical Facilities were subsequently reviewed by the International Accreditation Specialist to assess compliance with the ASEAN University Network (AUN) standards for higher education and World Federation for Medical Education (WFME) standards for medical programs. The review found the draft Standards aligned with almost 75% of the two international standards.⁴⁷ ⁴⁸ The draft Standards were assessed as providing a firm foundation to build on. Gaps between the draft Standards and International standards were identified as a focus for future work.

62. **Strengthen systems for internal quality assurance for HPTF.** Strengthening the internal quality assurance systems of HPTF was recommended following the survey and piloting exercise. The HHRSDP has supported: (i) In-service training for 150 teaching staff on internal and external quality assurance (42% female); (ii) In-service training for 7 training accreditors on skills for accrediting higher education (3 female). The International Accreditation Specialist supported the ASTT and target Universities to: (i) Prepare recommendations for implementing internal quality assessment activities; (ii) Develop a roadmap for implementation of quality assurance for all HPTF.

2C Stronger staff training and utilization in remote areas

63. **Special entry programs for EM students.** The Project supported programs through two mechanisms. The first was the provision of top-up payments to existing scholarship holders from remote and rural areas. The scholarship values varied between HPTF up to a maximum of 3,000,000VND per year.⁴⁹ A total of 3,000 top-up scholarships were provided. Amongst the beneficiaries 2,280 (76%) were students from an EM background and 1,020 (34%) were female. The second mechanism to support special entry for EM students was the prioritization of EM health workers from rural and remote areas for scholarships to study Medical Specialization Level 1.⁵⁰ Of the 242 scholarships, 51 (21%) were provided to EM health workers.

64. **Support of rural health workforce.** At design the project envisaged establishing a Professional Association of Rural Health Workers. As an Association was in place prior to project

⁴² 65/2007/QĐ-BGDDT date 01/11/2007.

⁴³ Thai Binh Medical University; Hue University of Medicine and Pharmacy; HCMC University of Medicine and Pharmacy; Can Tho University of Medicine and Pharmacy. Thai Nguyen University of Medicine and Pharmacy, Nam Dinh University of Nursing, Hai Phong University of Medicine and Pharmacy, Ha Noi Medical University, Pham Ngoc Thach University of Medicine.

⁴⁴ HHRSDP. *Report on Result of Survey on Quality of Medical Universities and Nursing Schools*, Ha Noi 2013

⁴⁵ HHRSDP. *Report on the Results of Building and Piloting a Set of tools for education quality assessment in Medical Universities*, Ha Noi 2014.

⁴⁶ Thai Binh Medical University; Hue University of Medicine and Pharmacy; HCMC University of Medicine and Pharmacy; Can Tho University of Medicine and Pharmacy.

⁴⁷ AUN standards: 42.86% fully matched, 28.57 were partially matched and 28.57% were unmatched.

⁴⁸ WFME medical program standards: 27% fully matched, 43% partially matched and only 30% not matched.

⁴⁹ This was the maximum scholarship amount set by PMU. The actual amount, up to this threshold, is determined by each PIU.

⁵⁰ Stakeholders from Hue University of Medicine and Pharmacy highlighted the prioritization of scholarships to EM health workers as an example of strengthening the special entry programs for EM students.

inception, activities focused on the training of rural health staff. The Project has: (i) Provided scholarships to 242 health staff from remote areas to study Medical Specialization Level 1 (30% female; 21% EM); (ii) Produced 6 sets of training curriculum on primary health care for rural and remote health staff;⁵¹ (iii) Provided training to 948 rural health workers on the primary health care curriculum (56% female; 20% EM); (iv) Provided training to 2507 rural and remote commune health workers to improve their training and teaching skills (43% female; 26% EM).⁵²

Output 3: Improved Management Systems in Health Service Delivery

65. Component 3 comprises two sub-components: (i) *3A: Piloting care pathways to organize clinical work*; (ii) *3B Introducing and testing case-based funding mechanisms*. Component 3 experienced delays in start-up, with activities commencing in earnest in 2013. An increase in implementation scope from 6 to 34 hospitals placed additional pressure on the component. While the broadening of scope was viewed as ambitious by ADB and DFAT the increase was justified by MoH and PMU as it: (i) Enabled multiple technical levels of hospitals to have input to the CPs development; (ii) Increased 'ownership' of the CPs amongst a greater number of facilities, supporting future implementation; (iii) Provided a larger and more representative basis for the later stage costing exercise.

66. At the time of the ICE, 95% of Component 3 activities were on target for completion by 31 December 2015.⁵³ The ICE team assessed that the work completed to date has established the required foundation for reaching the intended outputs and that, with an extension to the project completion date, the output targets specified in the DMF are likely to be achieved.

3A Piloting care pathway to organize clinical work

67. **Care pathways development.** The intended output of component 3A is the development of 24 CPs in 6 pilot hospitals. The Project exceeded this, developing care 26 CPs for high-volume conditions including 5 CPs for medical conditions that primarily affect women. The CPs were developed with input from 34 hospitals across 3 technical levels.⁵⁴ Following drafting the CPs were piloted in the 34 hospitals to assess their efficacy for organizing clinical work. In total 6,956 patients were treated following CPs. Preliminary analysis of data for 24 case types for which CPs were developed^{55 56} showed: (i) Reduced average length of stay (ALOS) for 16 out of the 24; (ii) Reduced average treatment costs for 20 out of the 24. Data by case type is detailed in Appendix 7, Tables 7.1 and 7.2.

68. **Peer review of care pathways.** Prior to final approval the CP's are subject to professional peer review. The MoH has established three Professional Committees under the AMS - Surgical, Gynaecological, and Internal Medicine - which are assigned responsibility for providing final approval recommendations for the CPs. At the time of the ICE all 26 CPs were still under review by the respective Committees. The project design included provision for international validation of the CPs. While stakeholders recognize the value of international validation,⁵⁷ international input into the 26 CPs has not proceeded.

3B Introducing and testing case-based funding mechanisms

69. **Casemix database.** The intended output of component 3B is the costing of 26 CPs and their pilot application as a case-based payment mechanism in a select number of hospitals. The Project, through Consulting Firm 3 with inputs from an International Consultant,⁵⁸ developed casemix software

⁵¹ Developed by Tay Nguyen University Faculty of Medicine.

⁵² HPTF take students on social practice requiring commune health staff to serve as instructors.

⁵³ Aide Memoire. ADB Review Mission. May 18-22.

⁵⁴ 2 Central hospitals, 11 provincial hospitals, and 21 district hospitals.

⁵⁵ In comparison with case types not following CP's in treatment.

⁵⁶ Adequate data available for 24 case types.

⁵⁷ Stakeholders cited as an example international review of the Quality Standard for the Hospital Management of Acute Stroke, developed in collaboration with the UK National Institute of Health Care and Excellence.

⁵⁸ International Clinical Data/Statistical Specialist.

based on the DRG grouper logic utilized in Thailand. The software enables: (i) Standardized documentation and coding of patient diagnosis using ICD10 and procedures using ICD 9; (ii) Grouping of coded patients using the casemix grouping methodology; (iii) Costing and the development of tariffs for each casemix group. At the time of the ICE over 2.4 million patient discharge records from 34 participating hospitals had been captured under the system, of which 856,727 have been assessed as complete for inclusion in the clinical coding and hospital costing exercise.

70. **Costing CPs and testing cased-based funding.** The Project has produced preliminary cost outcomes and cost per case analysis for 30 case types. This comprises 26 case types corresponding to the CPs developed under the HHRSDP and 4 case types corresponding to the CPs developed under the preceding pilot initiative.⁵⁹ The costing exercise was based on 210,074 discharge summaries, accounting for 25% of total number of cases captured under the database. The 30 case types were found to account for approximately 20% of revenue for the 34 hospitals.

71. From July 2015 the Project will: (i) Implement interactive modeling with 6 hospitals in Ha Noi to calibrate per-case payment levels for each of the 30 conditions of interest and to forecast financial impacts; (ii) Utilize findings from the simulation to draft guidelines for payment levels and delivery mechanisms for the per-case payment model; (iii) Provide technical support to MoH in consultations with the Ministry of Finance, VSS and hospitals to finalize and ratify the guidelines; (iv) Commence piloting of case-based payment using costed CPs. The ICE team assess the above-mentioned steps will require will 9-12 months to complete.

72. **Provider payment reform.** It is the view of the ICE team that the Project will make important contributions to MoH's wider work on provider payment reform. Study tours under the Project have provided exposure for key policy makers within MoH to casemix systems in Thailand and Malaysia, informing the Ministry's approach to provider payment reform. The casemix software and database, developed to provide the methodological platform for costing of the CPs, links to and will support the wider work on DRG based payment reform being implemented by the Ministry's Technical Taskforce on Provider Payment Reform.

IV. Overall Rating

73. The ICE team scored the HHRSDP's overall rating for effectiveness as 4. Ratings for individual effectiveness sub-criteria are listed in Appendix 1, Table 1.1.

⁵⁹ Under phase 1 of the Developing Better Health Initiative.

C. Efficiency

I. Costs and Disbursements

74. At appraisal the HHRSDP was estimated to cost \$76.3 million. This comprised a \$30 million program loan and \$30 million project loan from the ADB, an \$11.0 million grant⁶⁰ from the GoA and \$5.3 million from the GoV as counterpart funding. The Program Loan has 2 tranches of \$15 million each tied to specific policy actions. The Loan and Grant Agreements between ADB and the GoV specify the dates of project effectiveness, physical completion and loan/grant closing as 6 January 2011, 31 December 2015, and 30 June 2016 respectively.

75. The Project experienced significant implementation delays, specifically in project years 1-4. Cumulative project disbursements (loan and grant) at the end of project year 4⁶¹ reached 26% compared to an elapsed loan period of 73%. Cumulative grant disbursements reached 12% against an elapsed grant period of 89%. The schedule of cumulative disbursements against the elapsed loan period for total project funds and grant funds only is detailed in Appendix 9, Tables 9.4 and 9.5. Successive ADB review missions highlighted the slow rate of disbursement. During the MTR mission the possibility of a partial cancellation of the loan and grant fund was highlighted.⁶²

76. To expedite disbursement of grant funds a reallocation was approved in July 2014.⁶³ The primary reallocations were: (i) An increase in allocations to equipment (from \$0.05m to \$2.8m and the care pathways pilot (from \$0.34m to \$1.48m); (ii) A decrease in allocations to consulting services (from \$5.14m to \$3.5m). The original and revised allocations for grant, project loan and counterpart funds are detailed in Appendix 9, Table 9.1.

77. At the time of grant closing⁶⁴ 60% (6.45m) of grant funding and 56% (22.3m) of total project funding has been disbursed. Forward projections estimate disbursements at 31 December 2015 at 99% (10.65m) for grant funds and 89% (35.7m) for total project funds. DFAT will terminate the Co-financing agreement on 1 July 2015 and has issued a no objection letter for ADB to work with the GoV to reallocate the remaining grant contribution for disbursement by the project closing date. MoH have requested an extension to the project closing date to 30 June 2016. Data on loan and grant disbursements is detailed in Appendix 9, Table 9.2 and 9.3.

78. The Project's physical progress mirrors financial progress with activities only commencing in earnest in late 2012. The ADB review mission in April 2013 assessed physical progress to be at 30% against an elapsed loan period of 50% prompting ADB to flag the HHRSDP as a problem project.⁶⁵ At the time of the ICE physical progress was estimated to be at 81%.⁶⁶ By 31 December 2015, 85% of activities will have been completed. The assessment of project implementation status by component is attached in Appendix 10, Table 10.1.

79. The ICE team assessed the Project's sub-optimal implementation progress as resulting from a combination of project related and institutional factors. These factors are elaborated in the sections below.

II. Implementation Arrangements

80. **Project structure and staffing.** Following loan approval the MoH, as the executing agency (EA), established an interdepartmental PMU with the focal point in the ASTT.⁶⁷ The PMU management comprises four positions of Project Director, two Vice-Directors, and a Chief Accountant. Senior MoH officers, seconded on a part-time basis, hold these positions. A further six MoH officers

⁶⁰ AUD12 million equivalent.

⁶¹ 31 December 2014.

⁶² Aide Memoire, ADB Review Mission, 20 August – 2 September 2013.

⁶³ This included the allocation of 1.3m in grant funding resulting from exchange rate gains that was previously unallocated.

⁶⁴ Based on disbursement data at 15 May 2015.

⁶⁵ Aide Memoire, ADB Review Mission, 11 April – 25 April 2013.

⁶⁶ Aide Memoire, ADB Review Mission, 18 May – 22 May 2015.

⁶⁷ Decision 1338/QD-BYT 22 April 2010.

from various departments are assigned to project management and technical roles on the Committee. The PMU is staffed by 14 full-time project staff in finance, procurement, planning and support roles. As one of MoH's flagship programs the HHRSDP has benefited from close oversight from the Minister for Health and the respective Vice-Ministers. The Project has established 17 PIUs within the beneficiary universities, a variation on the implementation arrangements at design that proposed only six PIUs at the hub universities.

81. During the MTR ADB identified gaps in PMU capacity including the key areas of coordination with stakeholders, project management, procurement, provincial supervision, monitoring, and financial management. These gaps were viewed as contributing to the Project's sub-optimal implementation performance.⁶⁸ The PMU's government staff and the Mission conducted a review of PMU capacity and prepared an agreed list of actions to address the gaps identified. A review of Aide Memoires from subsequent ADB missions indicates that not all key actions were followed up on.

82. Assessment of PMU functioning by the ICE team noted the following issues contributing to the Project's sub-optimal implementation progress: (i) The part-time status of the Director, Vice-Director and Project Assistant roles is insufficient to ensure the required coordination and oversight, particularly as the Project comprises seven sub-components with inputs from a large number of actors; (ii) The PMU operates in a silo structure, with project components housed in separate locations and key functions such as planning occurring primarily within components with a lack of coordination across components; (iii) PMU utilizes a large number of consultants in management and technical support roles, with no formal mechanisms for monitoring their inputs and outputs or for periodic performance review. Inadequate monitoring was likely to reduce the efficiency of consultant utilization. Other downsides of the project-based PMU model observed on the HHRSDP, but also found on other ADB financed projects within MoH, are discussed under lessons learnt in Section III.B.

83. **Consultant utilization.** Both national and international consultants were engaged to support PMU in management and administration functions. Four national positions covering planning, procurement, finance, and coordination were engaged for a total of 182 input months at implementation,⁶⁹ reduced from 216 input months allocated at inception.⁷⁰ An International HRD and Coordination specialist was engaged for 21 input months at implementation, increased from 9 input months allocated at inception. The incumbent was also awarded contracts for three additional consultant positions under components 1A,⁷¹ 1B,⁷² and 2.⁷³ The four positions were subsequently bundled into a single contract of 47 months.

84. Technical support to project components was provided though individual consultants (international and national) and firms. A total of 178 months of individual international consultant inputs were anticipated at inception, revised to 84 input months at implementation.⁷⁴ A total of 1,063 months of individual national consultant inputs were anticipated at inception, revised to 829 input months at implementation.

85. While the ICE team did not assess individual consultants' performance, several factors relating to consultant utilization that contributed to the Project's sub-optimal implementation progress were identified. These are: (i) A number of key national consultants had none or limited prior experience on ADB projects and were therefore unfamiliar with ADB systems and procedures; (ii) The design did not include an International Procurement Consultant position. Viewed retrospectively this is seen as a critical gap given the proportion of the investment tied to procurement. (iii) The design included only one National Financial Management Consultant. At implementation this position was

⁶⁸ Aide Memoire, MTR Mission, 20 August – 2 September 2013.

⁶⁹ Inputs at implementation are based on the most recent Procurement Plan and Consultant Input Roster contained in the PAM dated 24 March 2015.

⁷⁰ Inputs at inception are based on the Procurement Plan and Consultant Input Roster contained in the PAM dated 13 October 2011.

⁷¹ International HR Development Specialist – Support Joint Committee and National HR Unit: HR Planning, Policy Development and Management Activities.

⁷² International HR Development Specialist – Support DMSA: Implementation of Legislation on Examination and Treatment.

⁷³ International HR Development Specialist – Support Health Professional Training Facilities: Development of HR Planning and Management Capacity.

⁷⁴ The reduction was due primarily to the non-recruitment of three training specialist positions under component 2 and the reduction in inputs for three casemix specialists under component 3.

required to oversee both financial management and accounting functions as the PMU finance team lacked sufficient skilled personnel familiar with ADB procedures; (iv) No formal mechanisms for periodic performance review of international and national consultants are in place.

III. Planning

86. The Project has a five-year plan that sets out activity scheduling and budget allocation at component, subcomponent, activity and sub-activity level. The five-year plan was approved in April 2011 and adjusted in October 2014 following the MTR. The PMU prepares annual plans, based on the five-year plan. Annual planning commences mid-July in line with the planning timeline for state-budget programs. With the additional requirements for ODA projects⁷⁵ the HHRSDP annual plans are usually approved in February or March. Exceptions have been the 2011 plan (approved in May) and the current 2015 plan that has not yet been approved. The significant delay in the approval of the 2015 plan is due, in part, to the requirement for consultation on fund reallocations and possible extension to the project timeframe.

87. The ICE team observed several limitations to the planning process that have contributed to the projects sub-optimal implementation progress: (i) The five-year plan is an overly prescriptive template that limits the opportunity for flexibility in annual planning. The PPTA, in providing costing to the sub-activity level, have imposed a rigid format that provides little room for the flexibility required to effectively design and plan activities at implementation; (ii) Limited systematic use of planning tools, at the project and component levels, to track and manage physical and financial implementation progress. Successive ADB review missions requested the development of cascade plans as an overall management and monitoring tool but this was not implemented; (iii) Planning occurs primarily within components, with a lack of coordinated planning across components. This silo effect is counter to the intention of the design that envisaged a level of integration between project outputs; (iv) The International HRD Specialist role was observed to be ineffective at coordinating planning inputs across the different project components.

IV. Procurement

88. The Project at design included procurement⁷⁶ for: (i) Goods with an estimated value of \$18.12m to be procured through 21 contracts; (ii) Works with an estimated value of \$1.2m to be procured through 6 contracts; (iii) Consulting services for both firms and individuals with an estimated value of 5.69m to be procured through 53 contracts. At implementation⁷⁷ the number of contracts under each category increased to: (i) 37 contracts for goods; (ii) 28 contracts for works; (iii) 56 contracts for consulting services.

89. The ICE team assessed procurement as a significant bottleneck contributing to the Project's sub-optimal implementation progress. Procurement was initially delayed by the late recruitment of the National Procurement Consultant and International Equipment Specialist. Both were scheduled to be mobilized in project year 1. The National Procurement Consultant was recruited in April 2012, more than one year after project inception.

90. Capacity within the procurement unit, both in terms of staff numbers and experience, was weak. The National Procurement Consultant had no prior experience on procurement for ADB projects and faced a significant learning curve at a time when procurement was already behind schedule. The design did not include a position for an International Procurement Consultant. Viewed retrospectively this is seen as a critical gap given the proportion of the investment tied to procurement.

91. The increase in the number of contracts to be managed by the procurement team, compared to those envisaged at design, placed a larger than anticipated burden on the team. This, coupled with lengthy approval procedures within MoH and ADB, resulted in protracted procurement processes. The average time to complete packages varied between procurement methods as follows: (i) 11+ months for packages of goods using international competitive bidding;⁷⁸ (ii) 11-12 months for packages of

⁷⁵ Review and issuance of a no objection letter by ADB prior to final approval by MoH.

⁷⁶ Procurement Plan October 2011.

⁷⁷ Procurement Plan 04 July 2014.

⁷⁸ Comprising 6 months for MoH's review and approval of bidding results and 4-5 months for contract execution including hand-over, acceptance and contract liquidation.

goods using national competitive bidding;⁷⁹ (iii) 9 months for consultant packages using consultants' qualification selection; (iv) 3 months for civil works packages using shopping.

92. The ICE team noted a number of the packages for consulting firms were broken into smaller contracts and/or individual consultants by PMU. The intention of the PPTA in grouping consultants into larger firms was to reduce the burden on PMU in terms of both procurement and subsequent management of consulting inputs. Experience from the HHRSDP and other ADB loan projects within MoH⁸⁰ has shown that consulting service packages with a large technical scope and value are likely to be subject to lengthy approval processes, with the ToR requiring simultaneous review by multiple departments within MOH. Consulting packages of this size present additional risk due to the limited pool of firms with the technical capacity to implement the ToR. Several packages of smaller scope and value present less risk and are subject to less protracted approval processes.

93. The ICE team notes that, at the time of the evaluation, significant progress has been made with an estimated 95% of procurement works complete. All 28 packages for HPTF have been contracted, with the final 8 contracts due for execution in September 2015. All consulting services identified under the PAM have been recruited with ongoing contracts currently being managed. In the context of the challenges to procurement outlined above, it is recognized that PMU have made considerable effort in moving procurement activities forward.

V. Performance of ADB

94. ADB has fielded ten missions since inception, comprising an inception mission, six loan review missions, the MTR and two special administration missions. This input is on par with other Projects of similar investment size. The Project benefited from inputs of ADB's Viet Nam Resident Mission (VRM) over the implementation period, specifically: (i) The delivery of trainings for PMU and PIU staff on project administration, procurement and other topics specific to loan and grant administration; and (ii) Ad hoc inputs from in-country specialists. No management inputs were provided from the VRM, with the Project being managed by ADB headquarters staff.

95. The ADB Officer responsible for the Project changed four times over the implementation period, primarily due to staff departures within ADB. Changes in ADB staff placed increased burden on the PMU through the need to 'orient' the new Officers to the Project. Transition of ADB staff appeared to result in a loss of continuity in managing key issues around the investment. A review of Aide Memoires from each ADB mission found common issues raised by successive missions with no clear management action taken on the part of ADB. Given the 'at risk' status assigned to the Project as early as April 2013⁸¹ more substantive action on the part of ADB was warranted to address the unsatisfactory physical and financial progress and, specifically, the high proportion of grant funds that will remain undisbursed at 30 June 2015. The ICE team acknowledges that, following typhoon Haiyan in November 2013, ADB's human resources were necessarily redirected to recovery efforts, reducing the management inputs available to the HHRSDP.

96. The ICE team note that the closing date of the Grant Agreement signed between the GoV and ADB is 30 June 2016, 12 months beyond the agreed termination date of DFAT's Co-financing Agreement with ADB (30 June 2015). The reason for the discrepancy in dates between the two Agreements was not apparent to the ICE team.

VI. Overall Assessment

97. The ICE team scored the HHRSDP's overall rating for efficiency as 4. Ratings for individual efficiency sub-criteria are listed in Appendix 1, Table 1.1.

⁷⁹ The Project organizes bidding in batches. Consequently a delay in any single step delays the whole process.

⁸⁰ For example, the Health Care in the South Central Coast Region Project

⁸¹ Aide Memoire, ADB Review Mission, 11 April – 25 April 2013.

98. In determining the rating the ICE team gave consideration to systemic factors, beyond the immediate influence of the Project, that impact on project efficiency. The implementation issues experienced on the HHRSDP are not unique to this project. Other ADB investments within MoH have experienced similar issues with slow physical progress, low disbursement rates through to project year 4 and the need for a 12-month extension to the project implementation period.⁸² This consistent pattern may be indicative of institutional barriers to efficiency relating to how Government and ADB procedures are managed within the Ministry. While it is beyond the scope of the ICE team to make an assessment of the systems within the Ministry, the team views the implementation experience of MoH's other ADB investment projects as a useful context against which to assess the efficiency of the HHRSDP.

⁸² For example: (i) Preventive Health System Support Project; (ii) Health Care in the South Central Coast Region Project.

D. Impact

99. The intended impact of the HHRSDP is: 'Improved health status and progress towards the health Millennium Development Goals (MDG)/Viet Nam Development Goals (VDG) in Viet Nam'. The Program has three performance targets:

- (i) Indicator 1: The 20 poorest provinces have achieved the VDG for reducing infant mortality by 2020.
- (ii) Indicator 2: The 20 poorest provinces have achieved the VDG for reducing maternal mortality by 2020.
- (iii) Indicator 3: Life expectancy figures for the poor and ethnic minorities in 20 poorest provinces have increased by at least 1 year by 2020.

100. Assessment of impact at the time of the ICE is premature. The Program has a minimum six months of activity implementation remaining, with the possibility of an additional twelve months if the proposed extension is approved. Performance indicators for Program impact are based on 2020 targets. The ICE team did seek provide an assessment of progress towards each indicator. This was possible for indicator 1 concerning infant mortality. An assessment of progress toward indicator 2 was not possible due to a lack of updated and reliable data on maternal mortality.⁸³ An assessment of indicator 3 was also hindered by the lack of available data.⁸⁴

101. To assess progress toward indicator 1, the infant mortality rate (IMR) in 2010, 2012 and 2013 (preliminary) for the 20 poorest provinces was collated. Between 2010 and 2013, 13 of the 20 provinces (65%) recorded reductions in IMR. The 2012 national target for IMR (15.4/1,000) was achieved, however none of the 20 poorest provinces reached the target individually. Data for 2013 shows progress towards the 2015 target (14.8/1,000) is being made on the national level, but again looks unlikely to be reached by the majority of the 20 poorest provinces. IMR data against the national targets for 2012 and 2015 is detailed in Appendix 11, Table 11.1.

⁸³ This challenge is recognized by the Joint Annual Health Review. In the annual assessment of Viet Nam's progress towards the MDGs, maternal mortality indicators have been replaced by indicators measuring 'the proportion of women who received antenatal care consisting of at least 3 visits, one in each of the trimester of pregnancy.'

⁸⁴ The Viet Nam Health and Living Standards Survey is one data source, however the data set was not available to the ICE team.

E. Sustainability

102. Assessment of the sustainability of investments under the HHRSDP has been made with reference to the main outputs under each component of the Project.

I. Component 1. Better Planning and Management of Human Resources

103. **Joint Committee on Human Resource Planning and Management.** The JC-HRPM, established as a policy commitment under the program loan, has served as a focal point for human resource management within the Ministry. The JC-HRPM is supported by a Secretariat, funded through project investments, which has been a key factor behind the Committees functionality. Post-project support for the Secretariat's operation is required to sustain this. At the time of the ICE the Secretariat had not been established as a formal unit of MoH and is assessed as less likely to be resourced post-project through GoV resources. An option of resourcing the JC-HRPM and Secretariat from alternate ODA sources following Program completion has been flagged.⁸⁵ If pursued, this will enable several years of continued operation of the JC-HRPM, building on and sustaining the foundation established through investments under the HHRSDP.

104. **Registration and licensing.** The ICE team assessed the system for registration and licensing as highly-likely to be sustained. Central to this is the regulatory framework of Decree 87 and Circular 41, which mandates provinces to implement a system for registration and licensing. Within this framework the Project has supported the Provinces to develop uniform implementation mechanisms, including a single national registration database, ensuring a consistent platform for the future operation and development of the system. A revision of Circular 41, currently underway by the AMS, will establish a legal basis for nationwide use of the registration and licensing database.

105. At the provincial level, Peoples Committees and the DoHs have allocated resources for operation of the registration and licensing system. Fees for registration and licensing provide a revenue stream to supplement DoHs' resources for system operation, however the current one-time lifelong registration limits the potential of fee collection as a long-term revenue source. A proposed amendment to Circular 41 requiring periodic re-registration by health care professionals, if enacted, will have a flow on benefit of ensuring a sustained revenue stream for the DoHs.

II. Component 2. Higher Quality Human Resources Training

106. **Strengthened teacher and management capacity within HPTF.** The Project has delivered a comprehensive program to strengthen capacity of teaching and management staff within the 17 HPTF, incorporating both long and short-term training programs. A key to sustained benefit from the investment in capacity building is the turnover of trained staff. The ICE was advised that staff retention is relatively high. Thai Binh University of Medicine and Pharmacy identified annual staff turnover at approximately 5%, but noted the majority of staff leave for other teaching institutions. Stakeholders also highlighted that staff undertaking postgraduate studies funded through the Project were required to commit to remain on staff for 5 years following completion of studies. The ICE team assess staff turnover as less likely to impact on the sustainability of the Project investments.

107. A second factor relevant to sustainability is the extent to which modern teaching methods imparted through the trainings are implemented. As noted by the Project's M&E Consultants, exposure to modern teaching methods alone may be insufficient to affect change in teaching practices,⁸⁶ and follow-up interventions in the workplace may be required to create an enabling environment for consolidating new learning into practice. No post training monitoring data was available to the ICE team. The final project evaluation should incorporate an assessment of post training outcomes, with specific assessment of the application of new teaching methods by HPFT staff.

108. **Laboratory renovations and equipment.** The Projects investment in laboratory renovations and equipment is the largest activity by value funded under the project loan. Sustaining the Project's

⁸⁵ The World Bank funded Health Professional Education and Training for Health System Reforms Project.

⁸⁶ HHRSDP. *Monitoring and Evaluation Report*. January 2015.

investment in facilities and equipment requires recurrent budget support for maintenance and additional budget allocation for consumables related to equipment use. The annual operating budgets of 8 HPTF receiving equipment under the project loan were reviewed by the ICE team.⁸⁷ Budget data is detailed in Appendix 12, Table 12.1. The budget for each facility included allocations for maintenance and consumables. Allocations for maintenance represented from 0.2% to 1.7% of annual operating budgets. HPTF stakeholders noted the allocation of maintenance budget was based on need. Currently the majority of equipment provided under the Project remains within the supplier warranty period. Allocations for consumables represented from 0.8% - 6.7% of annual operating budgets. Stakeholders noted the opportunity for some HPTF to generate income from Project equipment through the provision of services to hospitals. An example, cited at Hue University of Medicine and Pharmacy, was the capacity of their pathology department to provide services in immunohistochemistry to the University Hospital.⁸⁸ The ICE team assessed the investments in laboratory renovations and equipment as likely sustainable. The final project evaluation may consider undertaking an equipment audit to assess: (i) the proportion of equipment that is installed; (ii) the proportion of equipment that is functioning; (iii) the frequency of use.

109. **Accreditation of HPTF.** The initial scope of this activity, in intending to achieve accreditation of six medical universities, was ambitious. Accreditation of medical universities in Viet Nam is a medium term goal requiring a phased approach based on a clear road map and key milestones. The Project has contributed to the initial stages of this through the development and piloting of draft Standards for Accreditation for Medical Facilities, providing review of these Standards against international benchmarks, and facilitating improved internal quality assurance processes within several HPTF. The outputs represent initial actions toward the medium term goal. MoH have demonstrated their commitment to progressing work on accreditation of HPTF and medical programs through the: (i) the World Bank funded Health Professional Education and Training for Health System Reforms Project; (ii) Phase II of HHSRDP. In the context of these future investments, the outputs achieved and benefits gained under the HHSRDP are assessed as likely sustainable.

110. **Support for health workers in remote and EM areas.** The Project has supported capacity strengthening for health workers in rural and remote areas, including health workers from EM backgrounds. There will be 242 health workers with Specialized Medicine Level I qualifications, 948 rural health workers with increased knowledge on primary health care and 2507 health commune level health staff with improved training skills. No evaluation data on the outcomes of this capacity building was available to the ICE team. However the team has assessed that, given the pressing need for skill development amongst health staff from rural and remote areas, capacity building delivered under the HHSRDP is likely to bring ongoing benefits to the quality of service delivery in these areas.

111. The ICE team notes that ongoing benefits for health workers in rural and remote areas will be enhanced should the Project effectively develop e-learning as a modality for delivering CME to health staff. The e-learning packages developed by Hue University of Medicine and Pharmacy demonstrates the potential application of this modality for the delivery of CME. However, as discussed in Section 11.1, the ICE team have assessed that the Project's e-learning activities are less-likely to be completed as planned based on current progress and the absence of institutional policy and frameworks within HPTF to guide the development of e-learning courses.

III. Component 3. Improved Management Systems in Health Service Delivery

112. **Testing case-based funding mechanisms based on costed CPs.** This component of the project is a piloting initiative. As such assessment of sustainability has focused on the extent to which lessons from the pilot will be captured and utilized to inform the MoH's wider work on provider payment reform. On these criteria the ICE team assess the component as likely sustainable, on the proviso that the project extension is granted to enable the completion of the piloting of case-based payments as planned. The Project has demonstrated strong links between this component and the MoH's Technical Taskforce on Provider Payment Reform, providing the mechanism for lessons from the pilot to be disseminated amongst key decision makers.

⁸⁷ Data was unavailable for Hai Phong Medical and Pharmacy University.

⁸⁸ Equipment for Hue University of Medicine and Pharmacy was procured through the program loan.

113. An important output of the Project has been the development of the casemix software and database, which has provided a platform for drawing together the Technical Taskforce's work on other DRG related initiatives. An example is the MoH's project on Basic Health Service Packages, the records from which are being uploaded to the database to create a more comprehensive data set for informing MoH's work on DRGs. This demonstrated linking of project products to other initiatives of MoH is further evidence that benefits from investments under component 3 are likely sustainable.

IV. Overall Assessment

114. The ICE team scored the HHRSDP's overall rating for sustainability as 5. Ratings for individual sustainability sub-criteria are listed in Appendix 1, Table 1,1.

115. The team noted one key weakness, relating to the exit strategy for the grant component of the investment. As previously outlined, the closing dates for the grant and loan were not aligned. The Project has a further 12 months of implementation after the grant closing date,⁸⁹ which may now be extended to 24 months should the proposed project extension be approved. While the GoA's intention to exit the investment at 30 June 2015 had been clearly articulated from investment outset, there appeared no clear strategy for managing the potential risks to sustainability created through the exit from an 'ongoing' project in the event, now realized, that activities funded under the grant were only partially completed.⁹⁰

⁸⁹ To the date of loan closing on 30 June 2016.

⁹⁰ On 10 June 2015 ADB issued a no objection letter for ADB to work with the GoV to reallocate the remaining grant contribution for disbursement by the project closing date.

F. Gender Equality

I. Gender Considerations Integrated at Design

116. The Project Preparatory Technical Assistance⁹¹ included appropriate analysis of gender equality gaps and opportunities. Under the PPTA a Social Analysis and Strategy was prepared that included a review of: (i) Disease patterns and disease burden by location (urban/rural), ethnicity and gender; (ii) Health human resource distribution by gender;⁹² (iii) The MoH's Policy for the Advancement of Women and barriers to achieving this.⁹³ The Social Analysis and Strategy informed the development of the Program's Gender and Ethnic Minority Strategy (GEMS). The GEMS is included in the Report and Recommendations of the President (RRP) and in the PAM. Full implementation of the GEMS is required under the covenants of the project loan and grant. The Program's DMF includes agreed gender targets and output indicators for the overall program/project.

II. Gender Considerations at Implementation

117. **Technical support to GEMS implementation.** An International and National Gender and Ethnic Minority Specialist were engaged for 4 and 12 months respectively to support PMU to operationalize the GEMS during project implementation. The Specialists developed a Gender and Ethnic Minority Action Plan (GEMAP) which was intended to serve as a road map for PMU in implementing the GEMS and ensuring the gender targets contained in the DMF were met. During a follow-up mission in 2014 the International Gender and Ethnic Minority Specialist⁹⁴ worked together with the Program's M&E team to incorporate tools for the capture and reporting of gender and ethnicity disaggregated data, with specific focus on data required for reporting against the DMF and GEMS. The International Specialist also conducted a review of the implementation status of the GEMS to May 2014.⁹⁵

118. The ICE team reviewed the GEMAP and found the action plan was presented as a report rather than an operational tool. The document's structure was not aligned with the sequencing and structure of the measures contained in the GEMS and was unclear in the presentation of the proposed actions, persons responsible, and implementation steps. It was noted that the 2014 review of the GEMS implementation status by the International Consultant was structured more clearly around the measures specified in the GEMS.⁹⁶

III. Progress Against the Gender Indicators

119. As noted in previous sections of the ICE report, the collection of endline evaluation data has not yet been scheduled, limiting data available to the ICE team. To assess progress against gender indicators the ICE team drew on the GEMAP Progress Review (May 2014), which incorporates data from ADB's MTR mission. Additional updates at June 2015 were provided by the National Gender and Social Development Consultant. The implementation status of the GEMS is detailed in Appendix 13, Table 13.1.

⁹¹ TA-7029 (VIE).

⁹² The analysis noted the health workforce is predominantly female, but the majority of women are concentrated in lower-level positions. Review of 2006 data found 98% of midwives, 69% of nurses and 50% of assistant doctors were women, while only 35% of full doctors and 28-29% of health professionals with Masters and PhD degrees were women. Only a small percentage of women hold senior positions in the Ministry of Health or provincial health departments.

⁹³ The analysis noted that the MoH's goals to increase the proportion of women in higher-level positions in the health sector are undermined by the Ministry's regulations establishing more stringent age limits for women's participation in training and other career development activities.

⁹⁴ The National Gender and Ethnic Minority Specialist was not mobilized during this period.

⁹⁵ International Gender and Social Development Consultant. *Review of the Gender and Ethnic Minority Strategy (GEMS) Implementation Status by end of May 2014*. June 14, 2014.

⁹⁶ International Gender and Social Development Consultant. *Review of the Gender and Ethnic Minority Strategy (GEMS) Implementation Status by end of May 2014*. June 14 2014.

120. The 2014 review found overall progress on GEMAP implementation had been slow, with a number of key measures under preparation or not yet commenced. Slow progress was attributable to: (i) Overall delays in project activity implementation; (ii) Low awareness of the required actions under the GEMAP amongst staff and consultants; (iii) Limited inputs from the National Gender and Social Development Consultant to guide GEMAP implementation; (iv) The format of the GEMAP as a report rather than an operational tool.

121. The review at the time of the ICE found implementation progress against the GEMAP had improved with the Program achieving several of the gender targets in the DMF. All targets for participation of women in the Project's training activities were achieved. Five of the 26 CPs developed were for medical conditions that primarily affect women. Targets for scholarships in pre-service and in-service training were not achieved, with females representing 30-34% of the recipients across the different scholarship categories against a target of 50%. Data to assess progress against the percentage increase of women at senior levels in MOH was not yet available.

IV. Overall Assessment

The ICE team scored the HHRSDP's overall rating for gender equality as 4. Ratings for individual gender equality sub-criteria are listed in Appendix 1, Table 1.1.

G. Monitoring and Evaluation

I. M&E Considerations at Design

122. A draft DMF was prepared during the PPTA with a final revised version contained in the RRP. The DMF followed the format prescribed by ADB, including performance targets/indicators for both program and project level outputs. A number of indicators at outcome and output level incorporated gender targets.

123. The PAM specified the following requirements for M&E: (i) A program and project performance monitoring and evaluation system (PPMES) be established within 12 months of loan effectiveness; (ii) A baseline indicator study be conducted within the first six months of implementation; (iii) Quarterly progress reports in a format consistent with ADB's project performance reporting system; (iv) Consolidated annual reports. Resources for M&E allocated at design were limited to a lump sum allocation for national evaluation specialists to conduct mid and end-term reviews.

II. M&E at Implementation

124. **Revisions to the DMF.** The DMF was revised during implementation.⁹⁷ Revisions comprised: (i) Modification of the impact indicators to limit the measurement of IMR and maternal mortality rate (MMR) to the 20 poorest provinces (previously the 35 poorest provinces); (ii) Modification of the outcome indicator relating to the number of health professionals from central and provincial level institutions undertaking placements in rural and underserved areas (reduced from 500 per year to 240); (iii) Revision of dates for the delivery of key policy actions in line with the revised schedule for Tranche 2 deliverables agreed with ADB; (iv) Modification of the output indicator concerning the number of scholarships for pre-service and in-service for EM students (reduced from 80 to 50); (v) Revision of output indicators for component 3 to reflect an increased scope from 6 pilot hospitals to 20; (vi) A shift in focus of the output indicators for component 3 from a piloting and learning exercise to achieving actual reform of payment mechanisms in the 20 target hospitals.

125. **Program/project monitoring and evaluation system.** The PPMES was established in 2014 following commencement of the International and National M&E Consultants. Prior to this collation of monitoring data had occurred on an ad-hoc basis.⁹⁸ Baseline data was not collected during the first six months of implementation but compiled retrospectively by the M&E Consultants. Baseline measures for several key indicators had not been established at the time of the ICE.⁹⁹ The MTR Mission noted that project monitoring and reporting had not been satisfactory in the first half of the project. Regular monitoring and reporting only commenced immediately prior to the MTR with the submission by PMU of the first quarterly report and the MTR report. Both reports were assessed by ADB as incomplete.¹⁰⁰

126. The M&E Consultants developed monitoring tools for each component of the project. The tools were aligned with the DMF to capture data from impact to activity level. Additional data relevant to project evaluation was also captured. Examples include efficiency data relating to the utilization of renovated facilities and sustainability data relating to HPTF budget allocations for equipment maintenance. The format of the PPMES tools were consistent with the GoV's Aligned Monitoring Tool (AMT) enabling collation of data for quarterly reporting to the Ministry of Planning and Investment (MPI).

127. The PPMES tools were piloted at Thai Nguyen University and Hai Duong Province and introduced during a workshop in Da Nang. Feedback was used to revise the monitoring tools, which

⁹⁷ Revisions to the DMF were discussed with, and approved by ADB during the MTR Mission.

⁹⁸ The PMU's planning consultant served as a focal point for reporting of monitoring data.

⁹⁹ (i) Number of EM students graduated from each of the six prioritized medical universities by the end of 2011, by gender; (ii) Average length of stay (ALOS) for each of the 26 piloted case-type in year 2011.

¹⁰⁰ Aide Memoire, MTR Mission, 20 August – 2 September 2013.

were subsequently disseminated to all project provinces, 34 Hospitals and 17 HPTF. The M&E Consultants collate data on a quarterly basis. The first M&E Report was produced in January 2015 based on data for quarter 3 2014.

III. Assessment of the M&E System

128. **Scope of data collected.** Review of the PPMES found limitations in the scope of data collected. An objective in establishing the PPMES was to refine and expand verifiable indicators of project inputs, outputs and impact beyond those contained in the DMF.¹⁰¹ As described, the PPMES focuses primarily on the collection of data required to report against the DMF and AMT. Outcome measures not defined in the DMF, but nonetheless important for capturing the benefits of the investment, were not systematically assessed. Examples include: (i) Improved learning experiences of students following equipment provision, facility upgrades and teacher training; (ii) Training outcomes and, specifically, the extent to which new teaching methods are applied by teaching staff.¹⁰² The ICE team recommends that the Project's final evaluation incorporate systematic assessment of these two key outcome areas.

129. The ICE team also noted that key output data, important for progress monitoring, was not systematically captured by the PPMES. An example is output data against the targets in the Project's training plan.¹⁰³ While the PPMES report captures data for component 2 trainings, data for components 1 and 3 is not reported. Collating this requires sourcing the data from individual component coordinators.

130. Outcome data collected under the PPMES was also found to be limited in scope, focusing only on the outcomes specified in the DMF. Other outcome measures, central to capturing the benefits of the investment, were not systematically assessed. Examples include: (i) Training outcomes and, specifically, the extent to which new teaching methods are applied by teaching staff; (ii) Improved learning experiences of students following equipment provision, facility upgrades and teacher training. The ICE team recommends that the Project's final evaluation incorporate systematic assessment of these two key outcome areas.

131. **Completeness and quality of M&E data.** The ICE team reviewed the routine DMF report produced from the PPMES. The following limitations in the report were observed: (i) The report contained no progressive (annual) tracking of progress towards impact level indicators¹⁰⁴ or several of the outcome level indicators;¹⁰⁵ (ii) Data for several indicators was incomplete;¹⁰⁶ (iii) Data for several indicators was not aligned with the indicator measure;¹⁰⁷ (iv) Reporting against activities was structured around the activity headings in the DMF rather than those in the Five-Year Plan, which would have served as a more relevant basis for activity monitoring.

132. **Utilization of M&E data.** As highlighted by the MTR Mission, systematic use of M&E data did not occur in the first half of the project. The ICE team assessed the failure to establish a PPMES and collect baseline data in Project Year 1 as being attributable, in part, to inadequate resourcing of M&E activities. The budget at design made no provision for baseline data collection or for the engagement of M&E Consultants to support the PMU in establishing a PPMES. Resources were allocated for mid-term and endline inputs only.

¹⁰¹ This requirement is stated in the PAM.

¹⁰² The ICE team was provided with examples of training assessments. The content of these focused primarily on evaluation of the training delivery (i.e. process evaluation) rather than post-training assessment of the application of training outcomes.

¹⁰³ Contained in the PAM.

¹⁰⁴ Despite the data being available through secondary sources.

¹⁰⁵ (i) The number of Ethnic Minority students graduating from six prioritized medical universities; (ii) The number of health professionals from central and provincial level institutions undertaking placements in rural and underserved areas.

¹⁰⁶ For example, breakdown of data by gender and EM status.

¹⁰⁷ For example, data on the percentage of doctors and nurses practicing in public facilities registered presented as an absolute number due to the lack of appropriate denominator data.

133. The ICE team did find several examples of the data generated being used to inform activity review and learning following the establishment of the PPMES in 2014. Data from the first monitoring and evaluation report was presented at the Project Review Conference in January 2015. The M&E Consultants summarized the status of achievements in relation to the DMF, highlighted essential observations and provided recommendations for the next steps in activity implementation. The National M&E Consultants participate in the Project's weekly management meetings and provide data on a quarterly basis for reporting to MPI. The ICE found no evidence of the PPMES being used to monitor risks to the project.

IV. Overall Assessment

134. The ICE team scored the HHRSDP's overall rating for monitoring and evaluation as 3. Ratings for individual monitoring and evaluation sub-criteria are listed in Appendix 1, Table 1.1.

135. The ICE team's overall assessment is that the Project's monitoring and evaluation systems were less than adequate. M&E systems were established at a late stage of Project implementation, with reliable baseline data not yet established for a number of indicators. Data for progress monitoring and management decision-making was not systematically captured and utilized. Resources allocated to M&E in the budget were insufficient to ensure the timely establishment and operation of the PPMES.

III. LEARNING, CONCLUSIONS AND RECOMMENDATIONS

A. Analysis and Learning at Implementation

136. As discussed in Section **Found, limited Evidence** at the project-level of regular analysis and learning to inform management decision-making. However several examples of good practice in the application of analysis and learning were identified within individual components as outlined below.

137. **Registration and licensing system - Evidence-informed policy review.** The AMS, under the guidance of the Vice-Minister, is undertaking a policy review to identify required amendments to the LET, Decree 87 and Circular 41. The process draws heavily on the experiences of Provinces in implementing the registration and licensing system. A series of consultation workshops have been conducted with DoHs that focus on identifying regulations under the various Decrees and Circulars that are unworkable and serve as blockages to effective system operation. In parallel with this process, a Policy Specialist from Australia is providing technical review of the Decrees and Circulars to identify inconsistencies and areas for strengthening. The ICE team has assessed this process as a good example of the application of evidence-informed health policy-making by MoH¹⁰⁸ and an important output supported through the HHRSDP.

138. **Accreditation of medical universities and medical programs.** Achieving accreditation of medical universities and medical programs was assessed during implementation as being overly ambitious for a five-year program. Accreditation is considered a medium-term goal requiring a phased approach based on a clear road map and key milestones. Following an analysis undertaken by the ASTT, sub-component 2B, which focused on the accreditation of HPTF, was revised. A series of achievable outputs that represent preliminary steps towards the medium-term goal were defined and subsequently delivered under the sub-component.

139. **Care pathways pilot.** As a piloting initiative, the activity to cost CPs and test case-based funding is, by default, a learning and analysis exercise. The ICE note the team has demonstrated flexibility during implementation in an effort to improve the rigor of the pilot and the utility of the findings. The increase in hospitals from 6 to 34 for the initial costing exercise followed recommendations from academics of Harvard University to ensure a statistically significant sample size. The decision to link the casemix database to the broader DRG related work of the Technical Taskforce on Provider Payment Reform serves to maximize the benefits from the pilot. Other recommendations made during implementation, such as the need for modeling and simulation of per-case payment prior to actual implementation of the payment model, demonstrate the ongoing application of analysis and learning during the pilot activity.

B. Lessons Learnt

140. **Project-based PMU model.** The model of delivering discrete project-based investments through individual PMUs has been shown through the HHRSDP to be a less-efficient mechanism for investment management. The HHRSDP design included seven sub-components with a number of interlinked outputs, requiring strong coordination and oversight to maximize synergies between each and, in turn, the cumulative benefits of the investment. Delivery of each sub-component required inputs from a large number of actors including multiple departments within MoH, 17 HPFT, the DoHs in 64 provinces, and inter-agency inputs from MOET and Viet Nam Social Security (VSS). The structure of the project-based PMU model, and specifically the part-time status of the Director, Vice-Director and Project Assistant roles, was insufficient to ensure the oversight required. This, combined with other capacity weaknesses within PMU, contributed to the Project's sub-optimal implementation performance. Other downsides of the project-based PMU model include the: (i) High transaction costs involved in establishing individual PMUs for each project; (ii) Lack of continuity between the PPTA and implementation teams; (iii) Time lag from project inception to full implementation while staff of a new PMU familiarize themselves with procedures (both ADB and GoV) and establish systems; (iv) Loss of institutional knowledge when an individual project closes.

¹⁰⁸ <http://www.who.int/evidence/about/en/>

141. **Project financing modalities.** Experience from the HHRSDP demonstrates a key limitation of input-based financing for project investments. The PPTA, in providing detailed costings, imposed a rigid framework on the PMU. Once costings in the Feasibility Study are approved the PMU has limited ability to respond flexibly to changing needs during implementation due to the complex administrative procedures for revising funding allocations. The successful delivery of the program loan under the HHRSDP highlights the potential gains to efficiency and effectiveness that can flow from a shift to more responsive modalities for investment financing and delivery.

142. **Monitoring and evaluation.** Monitoring and evaluation is a critical component of investment cycle management, requiring sufficient resource allocation at design to support the timely development of a comprehensive performance monitoring and evaluation system. Lessons from the HHRSDP show that inadequate resourcing of M&E at the inception stage impacts on both the quality of inputs to support management decision-making during implementation and the assessment of benefits of the investment at completion. Adequate resourcing of M&E will become increasingly critical as financing modalities shift towards results focused investments.

143. **Procurement.** The procurement plan at design included several consulting service packages of large technical scope and value. Consulting packages containing multiple technical functions are subject to lengthy approval processes, requiring simultaneous review by multiple departments within MOH. Consulting packages of this size present additional risk due to the limited pool of firms with the technical capacity to implement the ToR. Several packages of smaller scope and value present less risk. Similar lessons were noted with respect to equipment procurement, with several large packages included at design being broken into smaller contracts to allow greater competition in bidding and to enable progressive processing of packages.

144. **Risk management.** The termination date of DFAT's Co-financing Agreement with ADB was 01 July 2015 whereas the closing date for the project loan was 30 June 2016. In a situation where DFAT will knowingly exit an ongoing project, a risk management strategy that identifies the potential impact of this exit on the investment's effectiveness, efficiency and sustainability should be prepared at outset and appropriate risk mitigation strategies identified.

C. Recommendations

I. Recommendations for Implementation of the HHRSDP

145. **Extension to project implementation.** The PMU has proposed a 12-month extension to project implementation, which is currently under review by ADB and MoH. The ICE team assess the extension as warranted to capitalize on progress that has now been made in delivering key outputs, including those funded under the grant. An extension will allow the remaining outputs to be delivered in full, thereby maximizing the benefits of the program loan, project loan and grant investments.

146. **Review of planning capacity.** Efficient planning will be critical to the effective delivery of outputs during the proposed extension period. With a potential eighteen months of implementation remaining an objective review of the planning capacity within the Project and the systems to support this is warranted. The review should determine key barriers to systematic planning and provide specific recommendations for changes to systems, tools or personnel to ensure efficient project delivery through to completion.

147. **Monitoring and evaluation.** The Project's final evaluation provides an important opportunity to assess the combined benefits of the program loan, project loan and grant investments. The ICE team recommend the final evaluation incorporate systematic assessment of the following outcome areas: (i) Improved learning experiences of students following equipment provision, facility upgrades and teacher training; (ii) Training outcomes and, specifically, the extent to which new teaching methods are applied by teaching staff; (iii) The Project's direct and indirect contributions to increasing the number of EM students graduating from HPTF and the proportion that return to work in rural and remote areas; (iv) The contributions, both intended and unintended, of the CPs pilot to MoH's wider work on provider payment reform. In addition, the final evaluation should include an audit of equipment supplied to the HPTF to assess: (i) The proportion of equipment that is installed; (ii) The

proportion of equipment that is functioning; (iii) The frequency of use. The extension to the project implementation period, if approved, provides the opportunity to establish mechanisms for capturing data for the above-mentioned assessments.

148. **Knowledge management.** The current decentralized nature of the Project, with components located in different offices, presents the risk at completion that the outputs, products and learning of the Project will be lost. The extension period provides an opportunity to ensure systems for effective knowledge management and the transfer of outputs, products and learning to the MoH are in place.

II. Recommendations for Future Programming

149. **Sector-wide program.** Health HRD is complex, with many separate but integrated parts contributing to the overall picture. Lessons from the HHRSDP demonstrate that health HRD will be best achieved through a comprehensive program of integrated investment implemented progressively through successive phases over a 10-15 year period. In this context it is recommended that future investments in health HRD move away from discrete project investments and be delivered under the umbrella of a sector-wide program, with health HRD as a core programming pillar.

150. **Mechanisms for investment management.** A shift to sector-wide programming creates the opportunity for innovation in the mechanisms used for investment management. Lessons from the HHRSDP and other ADB financed projects within MoH have shown that the model of individual project-based PMUs is fraught with inefficiencies. Drawing on these lessons it is recommended that MoH establish a single sector-wide PMU responsible for overseeing the portfolio of ADB investments in the health sector. Full-time leadership will ensure the level of governance and oversight required for a sector-wide program. A sector-wide PMU will improve efficiency through the retention of experienced staff, the building of accumulated knowledge over progressive investments and the utilization of pre-established procedures and systems. The ICE team acknowledges that a single sector-wide PMU represents a significant shift in MoH's established mechanisms for ODA management and view the reform as an important step toward improving both the efficiency and the effectiveness of investments in the health sector.

151. **Building on the investments under the HHRSDP – Registration and licensing.** The Project has supported the AMS to develop both the regulatory framework and systems for operationalizing key Articles under the LET concerning the registration and licensing of health professionals and health facilities. This is recognized as a significant output of the HHRSDP. Future investment in the registration and licensing system is warranted to consolidate the achievements. The AMS's current review of the Decrees and Circulars guiding the registration and licensing system will provide important insight to the obstacles for effective system operation and should be drawn on in defining the focus of future investments.

152. **Building on the investments under the HHRSDP – CME.** Ongoing investment in CME, for both the accreditation of CME programs and the development of modalities for CME delivery, should form a core component of future investments in health HRD. Health practitioners' access to CME is fundamental to enable them to meet the requirements for registration and licensing and, in turn, to improve the quality of the health workforce and health service delivery. Accreditation of CME programs is a component of the World Bank financed Health HRD Project. Future investments of ADB should compliment this work.

153. **Building on the investments under the HHRSDP – Provider payment reform.** An important lesson during implementation of the CPs pilot was the need to link work under the HHRSDP to the broader DRG related work of the Technical Taskforce on Provider Payment Reform. The Project achieved this, serving to maximize the benefits from the pilot. While the ICE team recognize ongoing investment in provider payment reform is warranted, it is recommended that future investments be developed under the umbrella of a health financing program rather than health HRD. The sector-wide approach to programming outlined in an earlier recommendation would allow this delineation of demand side (health financing) and supply side (health service workforce and health service delivery) investments.

APPENDIX 1: ICE EVALUATION CRITERIA

Table 1.1: Ratings against evaluation criteria and sub-criteria

RELEVANCE	
The investment was important for the partner government/s and aligned with their development priorities.	6
There is a clear link between what the investment delivered and objectives outlined in an Aid Investment Plan or similar document.	3
The investment was in an area of Australia's comparative advantage. Australia's value-add was clear.	4
The investment adapted to changes to the economic, social or political context during its lifetime.	4
Overall rating	5
EFFECTIVENESS	
The investment had realistic and measurable outcomes, supported by a robust logic and theory of change.	4
The investment achieved its outcomes.	4
The investment delivered key outputs and activities as expected.	4
Policy dialogue was used effectively to influence partners and support the investment's outcomes.	5
Intended beneficiaries are satisfied with the investment's results.	5
The investment actively involved disabled peoples' organisations in planning, implementation and monitoring and evaluation	2
The investment identified and addressed barriers to inclusion and opportunities for participation for people with disability.	2
The investment identified and addressed barriers to inclusion and opportunities for participation by indigenous peoples and/or ethnic minorities.	4
Overall rating	4
EFFICIENCY	
Activities and outputs were delivered on time and in a cost-effective manner.	3
Predicted budgets compared well to actual expenditure.	4
The investment's planned funding and timeframe were sufficient to achieve the intended outcomes.	4
There was sufficient staff (both ADB, DFAT and partners) with the necessary skills to manage the investment.	3
The investment modality and implementation arrangements were appropriate and proportional to the outcomes sought.	4
Implementation arrangements were well harmonised with other donors.	5
Implementation arrangements were aligned with partner government systems.	5
Overall rating	4
SUSTAINABILITY	
There is evidence that benefits of the investment will continue after Australia's funding completes.	5
The investment used local systems and processes and strengthened the capacity of local institutions.	5
The investment has a high level of ownership amongst developing country partners and beneficiaries.	5
Local, private sector or other non-ODA sources of funding are used to support the investment's outcomes.	4
The investment is resilient to the impacts of natural disasters and changing climatic conditions.	5
There was a clear exit strategy, and risks to sustainability have been appropriately managed.	3
Overall rating	5

GENDER EQUALITY		
Promoting equality between men and women was		
x a principal objective of this investment	o a significant objective of this investment	o not an objective of this investment
Analysis of gender equality gaps and opportunities substantially informed the investment.		4
Risks to gender equality were identified and appropriately managed.		4
The investment effectively implemented strategies to promote gender equality and women's empowerment.		4
The M&E system collected sex-disaggregated data and included indicators to measure gender equality outcomes.		4
There was sufficient expertise and budget allocation to achieve positive gender equality outputs and outcomes		3
As a result of the investment, partners increasingly treat gender equality as a priority through their own policies and processes.		4
Overall rating		4
MONITORING AND EVALUATION		
There is sufficient performance information to complete the FAQC with confidence.		3
Implementation progress was tracked against a baseline where appropriate.		3
A documented M&E arrangement has been in place that specified what would be assessed, by whom, when, how and at what cost.		3
The M&E system generated information that was used for management decision making, learning and accountability purposes.		3
There were sufficient resources allocated for M&E in the investment's budget.		3
M&E arrangements used or strengthened local M&E systems and/or capacity as appropriate, and provided for mutual accountability.		4
Reviews and evaluations for this investment were good quality		3
Reviews and evaluations for this investment have been published in a timely manner.		3
M&E arrangements included the participation of beneficiaries.		4
Overall rating		3

Table 1.2: Evaluation Criteria Rating Scale

Evaluation Criteria Rating Scale			
Satisfactory		Less than satisfactory	
6	Very good; satisfied criteria in all or almost all areas	3	Less than adequate; on balance did not satisfy criteria but did not fail in any major area
5	Good; satisfied criteria in most areas	2	Poor; did not satisfy criteria in major areas
4	Adequate; on balance satisfied criteria; did not fail in any major area	1	Very poor; did not satisfy criteria in many major areas

APPENDIX 2: DESIGN AND MONITORING FRAMEWORK

Table 2.1: Achievements against HHRSDP Performance Targets/Indicators

Design Summary	Performance Targets/Indicators	Achievements	Assumptions/Risks
Impact Improved health status and progress towards the health Millennium Development Goals (MDGs)/Viet Nam Development Goals (VDGs) in Viet Nam	The 20 poorest provinces have achieved the Viet Nam Development Goals for reducing infant mortality (22%) by 2020.	65% (13/20) of provinces had reduced IMR in 2013 compared to 2010 None of the 20 poorest provinces had reached the 2012 target (15.4) Refer to table 11.1 for data.	Assumptions <ul style="list-style-type: none"> Strengthened health systems and human resources improve health status. Government gives priority to health care for the poor. Population expectations and health service usage patterns influenced by improved quality of care at the community level. Risks <ul style="list-style-type: none"> reduced pace and momentum for policy reforms financial risks associated with counterpart funds and budget for operation and maintenance of new equipment.
	The 20 poorest provinces have achieved the Viet Nam Development Goals for reducing maternal mortality (58.3%) by 2020.	Data on MMR by province unavailable	
	Life expectancy figures for the poor and ethnic minorities in 20 poorest provinces have increased by at least 1 year by 2020.	Life expectancy figures for the poor and ethnic minorities by province not available	
Outcome Improved quality, efficiency and equity in health workforce and health service delivery.	By project completion (2015): At least 50% of doctors and nurses practicing in public facilities registered and licensed	At June 2015 229,939 health professionals, representing 91% of the estimated number of practitioners nationwide, who are registered under the licensing database. These include 67,166 doctors, 35,280 assistant doctors and 87,649 nurses.	Assumptions <ul style="list-style-type: none"> Government and National Assembly continue to give priority to enactment of health care legislation Risks <ul style="list-style-type: none"> Enacting ordinances are ambiguous or delayed in implementation Inadequate intake of minority candidates enrolled in the special entry for the planned training programs
	At least 50% of doctors and nurses practicing in public facilities participating in accredited continuing education programs (50% women)	At June 2015 67,166 doctors and 87,649 nurses had demonstrated compliance with requirement for CME at time of registration.	
	At least 240 health professionals per year for 3 years from central and provincial level institutions have done placements in	Number of health professionals placed in rural and underserved areas under Decree 1816/QD-BYT 2013 = 1037	

Design Summary	Performance Targets/Indicators	Achievements	Assumptions/Risks
	rural and underserved areas	2014 = 1012	
	10% increase in number of Ethnic Minority students graduating from six prioritized medical universities over baseline level	Average annual number of EM students enrolled at six prioritized medical universities between 2011-2014: Hanoi Medical University = 197 Hanoi University of Pharmacy = 314 Thai Nguyen University of Medicine and Pharmacy = 2,488 Hue University of Medicine and Pharmacy = 1,883 HCMC University of Medicine and Pharmacy = 1,672 Can Tho University of Medicine and Pharmacy = 1,313 Average annual number of EM students enrolled at 17 HPTF combined between 2011-2014 = 10,783.	
	20 hospitals with improved efficiency and quality of services through adoption of operational policies for use of care pathways and case-based payments	Piloting of case based payments using the costed care pathways has not yet commenced.	
Outputs			
1. Better planning and management of human resources	Program By April 2010, Ministry of Health (MOH) Decision on establishing Joint Committee on Human Resources Planning and Management.	HHR Committee established (Decision 1301/QD-BYT date 21/4/2010)	Assumptions <ul style="list-style-type: none">Continued government priority to health human resources strengthening Risks <ul style="list-style-type: none">Weak links with Provincial, District and Community Level Plans.Adoption of LET implementing ordinances delayed..
	By November 2009, the Law on Examination and Treatment (LET) approved by the National Assembly with provisions for establishing a system to register and license medical workforce and facilities.	The LET approved on 23/11/2009 and effective from 1/2011. The LET includes articles relating to the classification, accreditation, and licensing of health professionals and health care facilities. Implementation decrees and circulars critical to establishing the institutions	

Design Summary	Performance Targets/Indicators	Achievements	Assumptions/Risks
		and systems necessary to support the registration and licensing of health professional and health facilities include: <ul style="list-style-type: none"> Decree 87/2011/NĐ-CP dated 27/9/2011 Circular 41/2011/TT-BYT dated 14/11/2011 Decree 96/2011/NĐ-CP dated 21/10/2011 Circular 03/2013/TT-BYT dated 8/01/2013 Circular 22/2013/TT-BYT dated 9/8/2013 Circular 30/2014/TT-BYT dated 28/8/2014 	
	Project By project completion (2015): At least 50 public hospitals licensed under new accreditation system	822 public hospitals facilities registered	
	A health professional registration system established with all new graduating doctors and nurses registered in the year they graduate.	Core system for health professional registration established, mandated for national use, and operational centrally and in 63 provinces. (Official Letter No. 1356/BYT-KCB on 3/15/2013 instructing the use of the registration and licensing database by all 63 provinces.)	
	At least 10% increase of women at senior levels in MOH	Data not available at time of ICE	
2. Higher quality of training of human resources	Program By February 2010, the Master Plan for teaching institutions approved by the MOH	Decision 816/QĐ-BYT dated 16/3/2012 on the Master Plan for Health HR Development 2012-2020	Assumptions <ul style="list-style-type: none"> Staff able to participate in training Training institutions willing to participate and commit resources and capacity Supervisory system supports quality improvement, not
	By November 2009, the LET approved by the National Assembly with provisions for accreditation of training institutions and continuing education.	The LET approved on 23/11/2009 and effective from 1/2011. The LET includes articles relating to CME for health professionals Circular No. 22/2013/TT-	

Design Summary	Performance Targets/Indicators	Achievements	Assumptions/Risks
		BYT (09/08/2013) details the requirements for health professionals to undergo continuing medical education in order to achieve and maintain core skills and competencies.	<p>simply documenting strengths and weaknesses</p> <ul style="list-style-type: none"> • Rural workforce interested in strengthening professional identity
	By December 2013, MOH has adopted a set of minimum standards for equipment in Medical Colleges.	Decision 1239/QD-BYT dated 15 April 2013 concerning on standards for equipment required for medical universities and colleges.	<p>Risks</p> <ul style="list-style-type: none"> • Participation of women and Ethnic Minority candidates in training limited by lack of pre-requisites.
	By December 2015, MOH has completed policy impact review on increasing enrollment of Ethnic Minority students in health training.	Completed – MoH has completed a report concerning direct recruitment education in 34 provinces in Viet Nam during 2007–2011, implementing Decree 134, and Decision 1544 by the government	<ul style="list-style-type: none"> • Gap between strong and weaker training institutions widens • Supervision and accreditation activities constrained by lack of capable staff.
	<p>Project By project completion:</p> <ul style="list-style-type: none"> • 6 medical teaching institutions with upgraded teaching laboratories and equipment 	<p>17 medical teaching institutions with renovated laboratory facilities (works detailed in Appendix 6, Table 6.1)</p> <p>9 medical teaching institutions receiving equipment to upgrade teaching laboratories and classrooms (equipment is detailed in Appendix 8).</p>	<ul style="list-style-type: none"> • Institutions cannot release staff to participate in activities. • Incentives or support insufficient to ensure participation of Ethnic Minority students in training.
	<ul style="list-style-type: none"> • 600 university teachers (40% women) trained in modern teaching methods 	<p>112 teaching staff undertaking postgraduate training (Masters and PhD in basic science and practical skills in management (67% female)</p> <p>1191 teaching staff with improved basic-science & pre-clinical skills labs training capacity through in-service training (female: 61%; EM: 15)</p> <p>39 teaching staff with improved skills in competency-based learning through in-service training (female: 54%)</p>	<ul style="list-style-type: none"> • Ethnic Minority graduates do not return to work in rural areas. • Inadequate intake of minority candidates enrolled in the special entry for the planned training programs

Design Summary	Performance Targets/Indicators	Achievements	Assumptions/Risks
		1264 teachers / managers / clinicians with improved capacity to support practical clinical training of students (59% female; 15 EM). 69 teachers training on biosafety laboratories and laboratory quality assurance (74% female)	
	<ul style="list-style-type: none">at least 6 prioritized universities have met national teaching quality accreditation standards	Not achieved. The outputs were revised to: (i) A survey to assess the current conditions for accreditation within HPTF; (ii) A set of Standards for Accreditation for Medical Facilities developed and piloted; (iii) Internal Quality Assurance for HPTF strengthened (Refer to Section II.B)	
	<ul style="list-style-type: none">3 courses in each prioritized training institution accredited under continuing education system		
	<ul style="list-style-type: none">50 scholarships for pre-service and in-service for Ethnic Minority students (50% women) delivered	2280 students from EM groups receiving supplementary scholarships	
	<ul style="list-style-type: none">40% women in all study tours and teach exchange programs	53% (72/135) female participants on international study tours to ASEAN region counties 52% (122/253) female participants on in-Viet Nam study tours and teacher exchanges	
	<ul style="list-style-type: none">Special entry programs for EM students strengthened and operational	21% (51/242) of scholarships for health staff from remote areas to undertake specialized health professional qualifications targeted to EM health care workers	
	<ul style="list-style-type: none">50% scholarships reserved for women in pre-service and in-service training.	34% (1080/3000) of recipients of supplementary scholarships were female 30% (72/242) of recipients of scholarships for to undertake specialized health	

Design Summary	Performance Targets/Indicators	Achievements	Assumptions/Risks
	<ul style="list-style-type: none"> Professional Association of Rural Health Workers established and two meetings held by 2014 	<p>professional qualifications were female</p> <p>An association was in place prior to project commencement.</p> <p>242 scholarships for health staff from remote areas to undertake specialized health professional qualifications (30% female; 21% EM).</p> <p>The project has provided training to 948 rural health workers on primary health care curriculum (56% female; 20% EM).</p> <p>The project has provided training to 2507 rural commune health workers* to improve their training and teaching skills (43%% female; 26% EM).</p> <p>* Commune health workers in this because schools take students on social practice so commune health staff serve as instructors</p>	
3. Improved management systems health service delivery	<p>Program</p> <ul style="list-style-type: none"> a <i>De An</i> authorizing pilot study on case-based provider payment linked to care pathways issued by April 2010. 24 care pathways developed and used in 6 hospitals by December 2012 	<p>De An issued.</p> <p>Ongoing activity.</p> <p>26 CPs for high-volume conditions including 5 CPs medical conditions that primarily affect women.</p> <p>Preliminary cost outcomes and cost per case analysis for 30 CPs (includes 4 CPs from the previous pilot project)</p>	<p>Assumptions</p> <ul style="list-style-type: none"> Managers of pilot hospitals willing to participate. Health insurance authorities become active participants Pilot study demonstrates improvements in hospital efficiency and service delivery costing MOH pay due effort to institutional capacity building for provider payment reform <p>Risks</p> <ul style="list-style-type: none"> Managers and systems of district

Design Summary	Performance Targets/Indicators	Achievements	Assumptions/Risks
	<ul style="list-style-type: none"> Guidelines for financing reform associated with care pathways submitted to Ministry of Finance (MOF) and MOH by December 2012. 	Completed.	<p>hospitals are not strong enough to support new methods.</p> <ul style="list-style-type: none"> Case-based payment system does not provide pilot hospitals with adequate revenues. Care pathways and case-based payments have no impact on affordability of health care for the poor. Case-based payment implementation activities constrained due to lack of capable staff
	Project <ul style="list-style-type: none"> By 2014, 50% of revenue via case-based payment mechanism in each of the 20 project hospital 	Piloting of case based payments using the costed care pathways has not yet commenced.	
	By project completion: <ul style="list-style-type: none"> 20 hospital operating with reformed management and finance systems 	Piloting of case based payments using the costed care pathways has not yet commenced.	
	<ul style="list-style-type: none"> Approval of the implementation plan for introduction of a DRG-based provide payment mechanism 	Not yet achieved	
	<ul style="list-style-type: none"> ALOS reduced (0.15%) specified by each of the piloted case types 	Reduced average length of stay (ALOS) for 16/24 case types for which CPs were applied (adequate data only available for 24 case types) (Data on ALOS is detailed in Appendix 7, Table 7.1)	

APPENDIX 3: STATUS OF POLICY ACTIONS

Table 3.1: ADB's assessment of MoH's compliance with the tranche two policy actions

Policy Action No.	Policy Commitment	Supporting Documents	Status
1	The Joint Committee on Human Resources Planning and Management has submitted a report to MOH on reform, planning, and management of the health workforce.	Vietnamese and English translation of a report on health human resources reform, planning, and management to the Minister of Health from the Joint Committee on Human Resources Planning and Management dated May 2013 Vietnamese and English translation of Submission Document No. 6/BDH dated 12 April 2013 from the Joint Committee to the Minister of Health	Completed.
2	Standards for licensing of health facilities have been adopted, and institutional systems have been established and are operational.	Vietnamese and English translation of Circular No. 41/2011 on guidance on the granting of certificates to medical practitioners and operating licenses to medical examination and treatment establishments issued on 14 November 2011, stamped and signed by Vice Minister Nguyen Thi Xuyen on behalf of the Minister of Health Report on a registration and licensing system in Viet Nam showing the number of facility licenses issued as of 20 May 2013 signed by Dr. Khue, the director assigned responsibility for this activity in Circular No. 41	Completed.
3.1	A decree on the detailed provisions and guidelines for implementation of the Law on Examination and Treatment that contains provisions for the certification of health professionals has been issued.	Vietnamese and English translation of Decree No. 87/2011 on detailing and guiding articles of the Law on Examination and Treatment issued on 27 September 2011, stamped and signed by the Prime Minister Nguyen Tan Dung Vietnamese and English translation of Circular No. 41/2011 on guidance on the granting of certificates to medical practitioners and operating licenses to medical examination and treatment establishments issued on 14 November 2011, stamped and signed by Vice Minister Nguyen Thi Xuyen on behalf of the Minister of Health	Completed.

Policy Action No.	Policy Commitment	Supporting Documents	Status
3.2	A decree and/or related circulars have been issued to specify how the ethical, technical, and administrative violations by health professionals regarding examination and treatment should be handled.	Vietnamese and English translation of Decree 96/2011/ND-CP on regulations on sanctions against violations in examination and treatment issued on 21 October 2011, signed and sealed by Prime Minister Nguyen Tan Dung	Completed.
3.3	A circular has been issued to ensure that health professionals meet the requirement of continuing medical education and the compliance with such requirement will be monitored regularly.	Vietnamese and English translation of Circular No. 22/2013 on guidance on continuing education in the health sector issued on 9 August 2013, signed and sealed by the Minister of Health (Chapter 4, Article 21 assigns responsibility for inspection to MOH's Technology and Training Administration)	Completed.
3.4	The national advisory council at MOH level has become operational.	Vietnamese and English translation of Decision 5248/2012 on establishing the national advisory council within MOH for health professional certification issued on 28 December 2012, signed and sealed by the Minister of Health Nguyen Thi Kim Tien Minutes of the Meeting of the national advisory council dated 11 March 2013, signed by the Chair, Vice Minister Nguyen Thi Xuyen	Completed.
3.5	A national unit within MOH with responsibility for the health professional certification system has been established and is operational.	Vietnamese and English translation of report on the registration and licensing system in Viet Nam showing the number of health professional licenses issued as of 20 May 2013, signed by Dr Khue, the director assigned responsibility for this activity in Circular No. 41	Completed.
3.6	A national health professional certification database has been developed and tested.	Vietnamese and English translation of Letter 1356/BYT ordering use of the national database in all provinces and municipalities, signed and sealed by Vice Minister Xuyen Vietnamese and English translation of report on the registration and licensing system in Viet Nam showing the number of health professional licenses issued as of 20 May 2013 signed by Dr. Khue, the Director assigned responsibility for this	Completed.

Policy Action No.	Policy Commitment	Supporting Documents	Status
3.7	A national training plan has been submitted to the Minister of Health for training provincial staff involved in health professional certification.	Vietnamese and English translation of Plan 1439/KH-BYT for National Training on Health Professionals Licensing and Relicensing for the period 2013 to 2015 dated 28 December 2012, signed and sealed by Vice Minister Nguyen Thi Xuyen	Completed.
4	MOH has issued a guideline for the accreditation of pre-service and postgraduate health professional training programs within recognized educational institutions.	Vietnamese and English translation of guidelines for using and supplementing quality evaluation criteria at medical and nursing universities, signed and sealed by Nguyen Cong Khan, Director of Science Technology and Training Administration Vietnamese and English translation of Dispatch 175/K2DT-SDH dated 10 April 2013 requesting medical and nursing units to use the guidelines, signed and sealed by Nguyen Cong Khan	Completed.
5	MOH has issued a regulation (an upgrade of Circular No. 07/2008/TT-BYT dated 28 May 2008) on a system for accrediting continuing education courses, and a secretariat for implementing this system is established in MOH.	Vietnamese and English translation of Circular No. 22/2013 on guidance on continuing education in the health sector issued on 9 August 2013, signed and sealed by the Minister of Health (Chapter 3, Article 15 assigns responsibility for accreditation to MOH Technology and Training Administration, which has been actively working on accreditation as evidenced by agendas and notes of accreditation workshops.	Completed.
6	MOH has formally issued a set of minimum standards for equipment available in medical colleges based on courses provided and students enrolled.	Vietnamese and English translation of Decision 1239/QD-BYT on standards for equipment required for medical universities and colleges dated 15 April 2013, signed and sealed by the Minister of Health Nguyen Thi Kim Tien (including Vietnamese and English translation of equipment lists in Decision 1239)	Completed.
7	MOH has completed a policy review on the implementation of Circular No. 09/2008/TT-BYT dated 1 August 2009 and Decision 1816/QD-BYT dated 26 May 2008, reporting on policy outcomes for improved service quality and recommendations on constraints and impact.	Vietnamese and English translation of a report assessing implementation of Circular No. 09/2008/TT-BYT and impacts of this circular on health staff training institutions Vietnamese and English translation of a report assessing outcomes of Decision 1816/QD-BYT on the rotation of medical specialists to lower-level hospitals in order to improve health services quality, as well as impacts of the project on reducing hospital overcrowding	Completed.

Policy Action No.	Policy Commitment	Supporting Documents	Status
8	MOH has completed a policy impact review on increasing enrolment of ethnic minority students in health training, including the implementation of Decree 134/2008/ND-CP dated 14 November 2006 and Circular No. 13/2008/TTLT-BGDDT-LDTBXH-BTC-BNV- UBDT dated 7 April 2008, with recommendations to address constraints.	Vietnamese and English translation of a report concerning direct recruitment education in 34 provinces in Viet Nam during 2007–2011, implementing Decree 134, and Decision 1544 by the government (Circular No. 13/2008 is not included in the title of the report, but it is referenced in the text.)	Completed.
9	Twenty care pathways have been developed, benchmarked, and costed in 6 hospitals, and at least 3 of such care pathways are for medical conditions that primarily affect women or are primary care focused and delivered.	Vietnamese and English translation of 26 clinical care pathways (including 6 for women) List of hospitals involved in the clinical care pathways study, including list of hospitals involved in pilot costing study (English only) Vietnamese and English translation of a report on a pilot study, with cost estimates of 26 care pathways and preliminary outcomes for 4 hospitals	Partly completed. MOH has drafted 26 clinical care pathways. Pathways were benchmarked and costed in 4 hospitals, to be expanded to 34. MOH requests partial waiver of this commitment on grounds that substantial progress has been achieved and that the policy will be completed as part of ongoing project activities during the remaining project period.
10	Guidelines for management and financing reform associated with the introduction of case-based provider payment linked to care pathways have been submitted to MOH and the Minister of Finance of the Borrower.	Vietnamese and English translation of guidelines for case-based full-package payment Vietnamese and English translation of a standard submission document No. 31 dated 10 April 2013, signed by Pham Le Tuan, Director of the Department of Planning and Finance Vietnamese and English translation of a letter submitting the report to Viet Nam Social Security dated 11 April 2013, signed and sealed by Vice Minister Nguyen Thi Xuyen	Completed.

Source: ADB. *Progress Report on Tranche Release: Health Human Resources Sector Development Program*. November 2013

APPENDIX 4: TRAINING OUTPUTS

Table 4.1: Training outputs by gender and EM status against targets in the project training plan

Training Course	Training Output ^a	Total Trainees	Male		Female		Ethnic Minority	
Component 1: Improved Planning and Management of Human Resources								
International study tours for Coordination Committee and National Unit Staff	19 MOH Executives and specialist staff experiencing international HR planning, management, registration and licensing activities	64	33	52%	31	48%	0	0%
Masters or PhD for HHR Managers	18 health sector staff receiving post-graduate training in HR planning and policy development	44	13	30%	31	70%	0	0%
HHR Planning and Policy Development	18 health sector staff receiving post-graduate training in HR management	8	4	50%	4	50%	0	0%
HR Training for provincial HR staff	750 provincial staff receiving short-term training in HR planning, management and advocacy	178	91	51%	87	49%	0	0%
Training for Registration System Staff	375 registration & licensing staff trained in Registration, Licensing and Complaints processes	821	531	65%	290	35%	0	0%
Training for key staff of hospitals in 63 provinces on registration	improve awareness of health practitioners	2446	1267	52%	1179	48%	258	11%
English Lessons for PMU Staff	10 PMU staff members with improved English skills	10	4	40%	6	60%	0	0%
PIU Training for Bidding, Procurement, Disbursement, etc	24 PIU staff trained in Project Bidding, Procurement, Disbursement and Related Procedures	34	17	50%	17	50%	0	0%
Component 2: Strengthened Quality of Training of Human Resources								
In-service training	825 teaching staff with improved basic-science & pre-clinical skills labs training capacity	1191	462	39%	729	61%	11	1%
	40 teachers training on competency-based learning	39	18	46%	21	54%	0	0%

Training Course	Training Output ^a	Total Trainees	Male		Female		Ethnic Minority	
In-service training of training facility managers	240 training facility managers with improved management skills	517	259	50%	258	50%	3	1%
Study Tours	168 University staff observing international/regional health professional training outside of their own facilities	135	63	47%	72	53%	0	0%
Teacher exchanges between Health Professional Training Institutions in Viet Nam (3 months)	90 health profession teachers experiencing teaching in facilities other than their own	253	122	48%	131	52%	3	1%
Post-graduate Scholarships and Fellowships	90 health profession teachers with improved teaching skills	112	37	33%	75	67%	0	0%
In-service training to strengthen practical training capacity	800 teachers / managers / clinicians with improved capacity to support practical training of students	1264	519	41%	745	59%	7	1%
	40 teachers training on biosafety laboratories and laboratory quality assurance	69	18	26%	51	74%	0	0%
In-service Training to improve capacity of quality assurance in medical education	150 staff with improved supervision and curriculum evaluation skills	78	45	58%	33	42%	0	0%
	Support training accreditors accrediting higher education	07	04	57%	03	43%	0	0%
Supplemental Scholarships for Ethnic Minority	3000 student from Ethnic Minority groups receiving Supplemental Scholarships	3000	1980	66%	1020	34%	2280	76%
Scholarships for Remote Health Workers	160 people from Remote Areas with specialized health professional qualifications	242	170	70%	72	30%	51	21%

Training Course	Training Output ^a	Total Trainees	Male		Female		Ethnic Minority	
In-service Training	960 remote teachers with improved Primary Health Care training skills and understanding of rotation requirements	2507	1421	57%	1086	43%	644	26%
Training of rural health workers	5600 rural health workers with improved Primary Health Care skills	948	414	44%	534	56%	188	20%
Component 3: Improved Management Systems in Health Service Delivery								
Short-Term Training	40 people with practical understanding of clinical management and provider payment reforms	540	276	51%	264	49%	32	6%
International study tours for Coordination Committee and National Unit Staff	38 people experiencing international provider payment reforms	90	56	62%	34	38%	0	0%

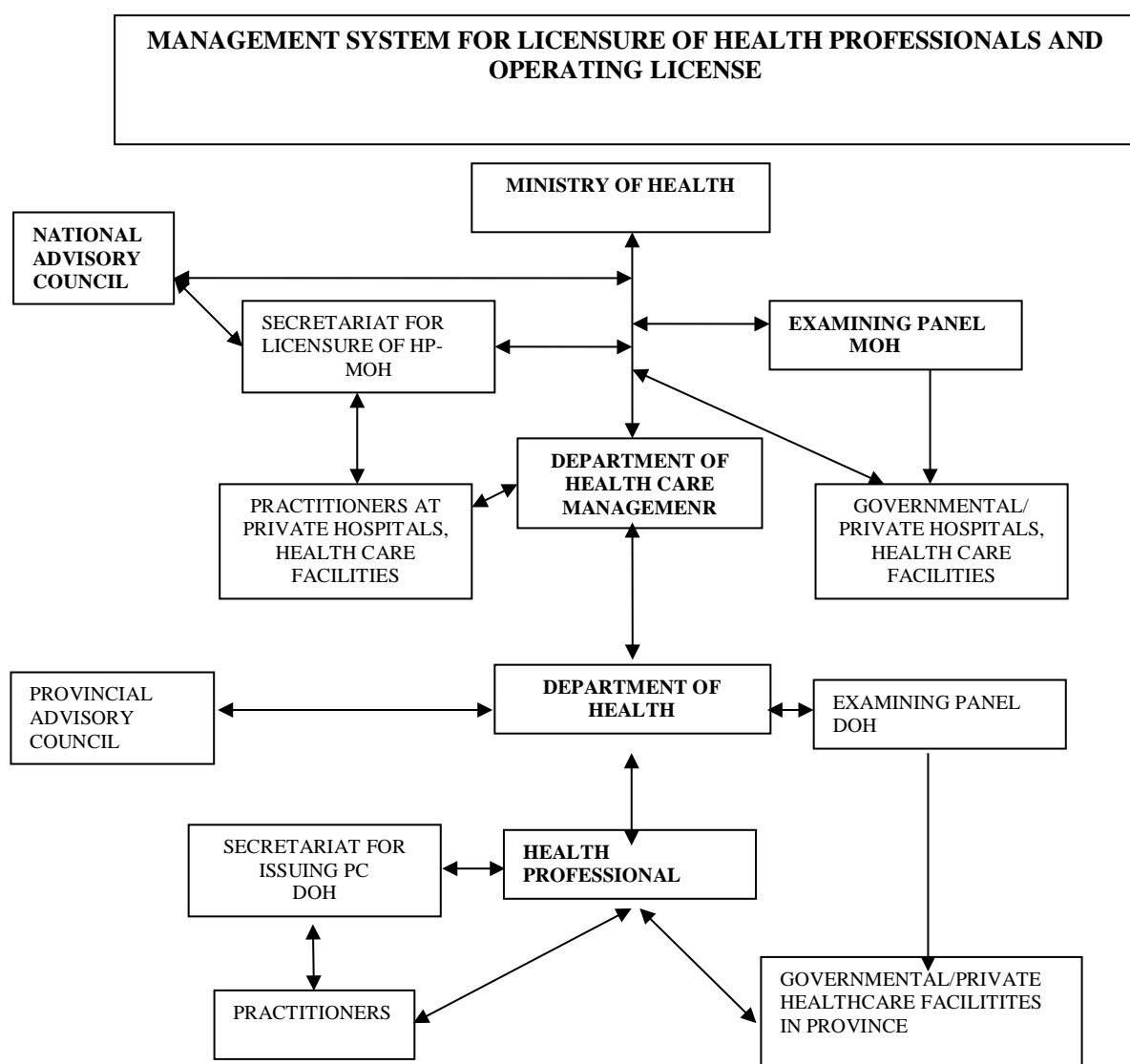
Source: HHRSDP PMU

Notes:

^a PAM 24 March 2015

APPENDIX 5: REGISTRATION AND LICENSING SYSTEM

Figure 5.1: Structure for the registration and licensing system at Central and Provincial levels



Source: Report on Activities of the Licensure of Health Professionals Office (Component 1B); July 2013.

Table 5.1: Number of health practitioners registered by profession ^a

Practitioner Type	No.
Doctor	67,166
(Doctor public facility)	(54,785)
Nurse	87,649
Birth Attendant	20,039
Technician	15,053
Assistant Doctor	35,280
Healer	286
Dentist	807
Traditional Medicine	3,659
Total Registered	229,939
Total Practitioners (estimate)	251,342 (91%)

Source: HHRSDP Component 1B

Notes:

^a Data at 09 June 2009

APPENDIX 6: FACILITY UPGRADE WORKS IN SEVENTEEN UNIVERSITIES

Table 6.1: Description of works in 17 HPTF

Facility	Scope of Works
Ha Noi Medical University	Renovation of 01 lab
Ha Noi University of Pharmacy	Upgrading 03 labs for chemistry analysis
Ha Noi School of Public Health	Upgrading 03 labs and 01 operation practice room
Viet Nam Academy of Traditional Medicine	Renovation of 06 labs and practice rooms
Medical Equipment Technical Vocational College	Renovation of 04 labs and practice rooms
Hai Phong Medical University	Upgrading 3 labs for public health, pharmacy and medical technics
Hai Duong Medical Technical University	Upgrading 11 labs for basic health
Hai Duong Central College of Pharmacy	Renovation of 2 farms for Chinese medicine, upgrading 11 labs for various subjects
Thai Binh Medical University	Upgrading 16 labs for various subjects
Thai Nguyen University of Medicine and Pharmacy	Upgrading 06 labs for basic health subjects including a 3 floor building
Nam Dinh University of Nursing	Upgrading 15 nurse practice rooms and 04 labs for basic health
Da Nang University of Medical Technology and Pharmacy	Upgrading 11 practice rooms for various subjects
Tay Nguyen University- Faculty of Medicine and Pharmacy	Upgrading labs of block 4 and block 5 of the Medical Department.
Vinh Medical University	Renovation of 03 practice rooms
Hue University of Medicine and Pharmacy	Upgrading 03 labs and 03 practice rooms
HCMC University of Medicine and Pharmacy	Arrangement of professional tables for the Basic Health lab
Can Tho University of Medicine and Pharmacy	Upgrading 05 labs for basic health subjects

Source: HHRSDP M&E Consultants

APPENDIX 7: CARE PATHWAYS PILOT

Table 7.1: Comparison of ALOS for patients treated and not treated with CPs

Case Type-code and Description		ALOS without CP		ALOS with CP		Change
		N	ALOS	N	ALOS	%
1.1	Miscellaneous digestive disorders age > 9, no CC	7	10.86	14	3.64	34%
1.9	Esophagitis, gastritis and dyspepsia age > 9, no CC	19146	3.47	42	3.38	97%
2.0	Nervous system infection excluding viral meningitis, transferred, no CC	102	11.95	NA	NA	NA
3.0	Dengue, adult, with mild CC	460	5.57	31	7.16	129%
4.0	Trĩ -Internal hemorrhoids without complication	3296	6.86	130	3.85	56%
5.0	Vaginal delivery without complicating Dx	32246	3.29	233	3.17	97%
6.0	Caesarean delivery without complicating Dx	26689	5.95	164	6.59	111%
7.0	Ovarian/adnexal malignancy, no CC	317	8.31	NA	NA	NA
8.0	Non-malignant uterus disorders, no CC	302	8.02	12	7.33	91%
9.0	Diabetes with complicated PDx, with mod CC	6733	11.02	494	8.82	80%
10.0	Appendectomy, no CC	9510	6.03	131	4.19	69%
11.0	LOS 6 hours or less with cataract proc, with or without CC	1663	5.21	282	4.46	86%
12.0	Hypertension, no CC	46634	7.20	1207	6.07	84%
13.0	Coronary atherosclerosis, no CC	11939	7.22	142	5.42	75%
14.0	Stroke	621	7.77	2	9.50	122%
15.0	Heart failure and shock, with mild CC	99	9.10	31	8.64	95%
16.0	Tonsillectomy & adenoidectomy, no CC	10766	5.34	42	4.86	91%
17.1	Chronic obstructive pulmonary disease, with mod CC	6868	8.29	341	7.92	96%
17.4	Chronic obstructive pulmonary disease, with mod CC	10725	8.83	129	5.63	64%
18.0	Bronchitis and asthma, with mild CC	6461	7.47	260	6.25	84%
19.0	Other digestive system diagnoses, not transferred, with severe CC	2478	7.31	58	7.29	100%
20.0	Disorders of pancreas, except malignancy, with mild CC	2029	7.96	NA	NA	NA
21.0	Disorder of biliary tract, no CC	4516	8.18	93	10.10	123%
22.0	Gãy xương ở cẳng tay, bàn tay, bàn chân, tuổi >17, no CC	1978	6.40	30	8.20	128%
23.0	Epidural hemorrhage	NA	NA	NA	NA	NA
24.0	Fx, spr, str & disl of up arm& low leg age >17, with mild CC	679	7.97	32	11.66	146%
25.0	Complicated peptic ulcer, no CC	1722	6.67	NA	NA	NA
26.0	Transurethral prostatectomy, no CC	2127	8.85	30	7.23	82%
27.0	Non-malignant breast disorders, no CC	611	8.05	NA	NA	NA
28.0	Hydatidiform mole	33	9.19	7	5.86	64%
29.0	Ectopic pregnancy	829	6.53	46	6.78	104%
30.0	Endocrine disorders, no CC	2133	8.04	NA	NA	NA
Total		213720	6.25	NA	NA	92%

Source: HHRSDP, Component 3

Table 7.2: Comparison of average treatment costs for patients treated and not treated with CPs

Case Type-code and Description		ACOST without CP	ACOST with CP	% Change
		ACOST	ACOST	%
1.1	Miscellaneous digestive disorders age > 9, no CC	4,430,371	2,015,761	45%
1.9	Esophagitis, gastritis and dyspepsia age > 9, no CC	756,524	507,143	67%
2.0	Nervous system infection excluding viral meningitis, transferred, no CC	2,336,546	NA	NA
3.0	Dengue, adult, with mild CC	2,131,585	1,758,645	83%
4.0	Trĩ -Internal hemorrhoids without complication	2,115,209	623,637	29%
5.0	Vaginal delivery without complicating Dx	732,262	378,123	52%
6.0	Caesarean delivery without complicating Dx	1,770,802	2,664,394	150%
7.0	Ovarian/adnexal malignancy, no CC	3,435,609	NA	NA
8.0	Non-malignant uterus disorders, no CC	2,659,659	1,021,008	38%
9.0	Diabetes with complicated PDx, with mod CC	3,257,040	1,709,912	52%
10.0	Appendectomy, no CC	2,146,154	697,444	32%
11.0	LOS 6 hours or less with cataract proc, with or without CC	3,517,019	1,929,927	55%
12.0	Hypertension, no CC	1,704,780	1,290,225	76%
13.0	Coronary atherosclerosis, no CC	1,533,322	661,976	43%
14.0	Stroke	6,821,302	1,275,364	19%
15.0	Heart failure and shock, with mild CC	2,530,048	2,612,428	103%
16.0	Tonsillectomy & adenoidectomy, no CC	977,468	728,571	75%
17.1	Chronic obstructive pulmonary disease, with mod CC	3,157,555	2,523,752	80%
17.4	Chronic obstructive pulmonary disease, with mod CC	3,296,902	844,280	26%
18.0	Bronchitis and asthma, with mild CC	2,187,724	1,290,467	59%
19.0	Other digestive system diagnoses, not transferred, with severe CC	2,165,594	1,932,724	89%
20.0	Disorders of pancreas, except malignancy, with mild CC	2,212,156	NA	NA
21.0	Disorder of biliary tract, no CC	3,031,362	4,045,411	133%
22.0	Gãy xương ở cẳng tay, bàn tay, bàn chân, tuổi >17, no CC	1,434,700	1,379,352	96%
23.0	Epidural hemorrhage	NA	NA	NA
24.0	Fx, spr, str & disl of up arm& low leg age >17, with mild CC	NA	NA	NA
25.0	Complicated peptic ulcer, no CC	2,441,559	NA	NA
26.0	Transurethral prostatectomy, no CC	3,994,649	4,998,944	125%
27.0	Non-malignant breast disorders, no CC	1,776,991	NA	NA
28.0	Hydatidiform mole	2,235,711	786,592	35%
29.0	Ectopic pregnancy	2,038,563	907,289	45%
30.0	Endocrine disorders, no CC	2,154,881	NA	NA
Total		1,758,604	1,569,784	67%

Source: HHRSDP, Component 3

APPENDIX 8: EQUIPMENT PROCUREMENT

Table 8.1: Phase one equipment allocation for 9 HPTF

No.	Description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Y Hà nội	Được Hà nội	Total
EQ 02	ECG EEG spirometer										
1	ECG 6 channels		1						2		3
2	EEG computed video						1		1		2
3	Spirometer								2		2
4	Electromyography (Evoked potential measuring System)								1		1
5	Ambulatory blood pressure monitoring							1			1
6	Defibrillator			1		1					2
7	ELISA system	1					2		2	2	7
8	Auto ELISA system					1					1
9	Kymograph								5		5
EQ 03	Human Anatomy 3D software										
1	Human Anatomy 3D software		1	1		1			1		4
2	Human Anatomy 3D software for self study			1					1		2
3	Laparoscope Surgery training simulator								1		1

No.	Description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Y Hà nội	Được Hà nội	Total
EQ 04	Centrifuges and basic laboratory Instrument										
1	Bench top Centrifuge, hectic	1					2	1	3		7
2	Bench top Centrifuge				1		1		7		9
3	High Speed Centrifuge								1		1
4	Spindow Centrifuge						2		4		6
5	Refrigerated Centrifuge eppendorft tube						1	1	1		3
6	Refrigerated Centrifuge high speed									1	1
7	Centrifuge for eppendorft tube						1				1
8	Refrigerated Centrifuge						2				2
9	vacuum centrifuge						2				2
10	Water Bath	1	1			2	14	3			21
11	Water Bath shaking						1		6		7
12	Ultrasonic washing bath	1		4			1	1	2		9
13	Horizontal shaker			1			1		1		3
14	Pipette Aids						4				4
15	8 channels micropipette								1		1
16	pH meter	1	1	9		2	5	3	7		28
17	Vortex shaker						6		2		8
18	Thermo Mixer						1		4	1	6

No.	Description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Y Hà nội	Dược Hà nội	Total
19	Magnetic stirrer with hot plate	2	1	6			35	1	6		51
EQ05	Sterilization, bio safety cabinet										
1	Bio Clean Bench Class 2	1					2		3		6
2	Clean Bench	1					4		3	3	11
3	Hood Laminar	1		4			3	3	1		12
4	PCR reaction cabinets						1		2		3
5	Anaerobic incubator				1						1
6	Temperature and environmental chambers level 1							1			1
7	Temperature and environmental chambers level 2									1	1
EQ06	Deep freezers Low temperature, incubator, autoclave										
1	Deep Freezers Low temp -86° C, approximate 500 liters, chest type							1		1	2
2	Deep Freezers Low temp - 86° C, approximate 300 liters, chest type						1		2	0	3
3	Deep Freezers Low temp - 86° C, approximate 300 liters, upright type						1		3		4
4	Deep Freezers Low temp - 30° C, approximate 300 liters, upright type								6		6
5	Refrigerator blood bank	1									1

No.	Description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Y Hà nội	Dược Hà nội	Total
6	Fridge						4	1	14		19
7	Refrigerators laboratory			2			1				3
8	Autoclaves 100l						1				1
9	Autoclaves 50l	1					3	2	5	1	12
10	Autoclaves Bench top (Odonto-Stomatology)								4		4
11	Drying Oven, 250° C, approx 150 liters	2					3	2	5		12
12	CO ₂ incubator	1		1	1		1		1	2	7
13	Shaking Incubator			3					3		6
14	Incubator	1						2	7	1	11
EQ07	Office equipment										
1	Laser Printers						14	25	29		68
2	Color Printers						3	6	10		19
3	Photocopy Machine						2	3			5
4	UPS equipment 1KVA							20	2		22
5	UPS equipment 3KVA						2	5	3		10
6	UPS equipment 5KVA						1				1
7	Lap tops				10		14	10	20		54
8	Scanner						2	1	3		6
9	Professional Scanner for test scoring					1			1		2

No.	Description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Y Hà nội	Được Hà nội	Total
10	A3 high speed printer								1		1
11	Projector ≥ 3000 Ansi lumens		1		8	3	28		1		41
12	Projector ≥ 3500 Ansi lumens					7		40			47
13	Dehumidifier					4	2		24		30
14	Air conditioner 18000 BTU						15		28		43
15	Air conditioner 12000 BTU						4				4
16	Furniture (Desk and Chairs type 1)								200		200
17	Furniture (Table and Chairs type 2)					60			70		130
18	Server					1	1		2		4
19	LAN accessories for 5 room x 50 PC					1	1		6		8
EQ08	Computer sets and Server and LAN Accessories										
1	Personal Computers					69	123	420	150		762
2	Personal Computers (All in one)								200		200
EQ09	Microscopes Binocular and Microscopes for Research										
1	Microscopes binocular for Students						20	0	52		72
2	Microscopes binocular for Teacher	1							10		11
3	Microscopes with camera to TV	4		6			1	2	4	3	20
4	Microscopes stereo zoom	1				2	3	1	5		12
5	Microscopes stereo with Camera									1	1

No.	Description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Y Hà nội	Được Hà nội	Total
6	Microscopes stereo with heat plate								1		1
7	Microscopes Inverted Fluorescence						1				1
8	Microscopes Fluorescence with camera			1					1		2
9	Microscopes 5 observers			1			1		1		3
EQ10	Other Laboratory Instrument										
1	ADN/protein spectrophotometer				1	1	3	0	2		7
2	UV VIS spectrophotometer	1			2		4		0	2	9
3	Cryostam Microtome			1	1		1		1		4
4	Microtome			2			1		3	0	6
5	vacuum drying oven								1	1	2
6	Vacuum rotary evaporator 1 (5l)						3				3
8	Freeze Dryer for medical lab				2		1				3
10	Microwave oven						1		2		3
11	Suction unit		1						2	0	3
12	Orbital shaker						6				6
13	Ice flack Maker						1		2		3
14	Variable volume 1 channel micropipettes				10		18	9	22	0	59
15	Homogenizer						2		1		3

No.	Description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Y Hà nội	Được Hà nội	Total
16	Muffle Furnaces						3	1			4
17	Redistilled Water Apparatus	1			3		2		3		9
18	Ultra pure water purification	2			1				2		5
19	Distilled Water Apparatus			4	3			1			8
EQ11	System of Kariotyping by FISH and Bimolecular Instruments										
1	Automatic System of Kariotyping by FISH and metaphor search								1		1
2	Semi Automatic System of Kariotyping by FISH				1		1				2
3	PCR thermal Cycler						1		2	1	4
4	PCR real time						1		2		3
5	Electrophoreses vertical			2					2		4
6	Electrophoreses horizontal			2			4		4	0	10
7	Gel doc and analysis System, Fluoresce								1		1
8	Gel doc and analysis System						1	0	1	1	3
9	UV Transilluminators						1	0	3		4
10	Electrophoreses protein						3				3
11	Electrophoreses electro									1	1

Source: HHRSDP, Procurement Unit

Table 8.2: Phase two equipment allocation for 9 HPTF

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Dược)	Unit price (USD)	Quantity
EQ12	Pharmacology, Biophysics Practice Equipment											
1	Isometric Force Transducers									1	3,500	1
2	X-ray Test Unit						1					1
3	Acoustic Doppler Shift Test Unit						2					2
4	Eye testing Unit							2				2
5	Audiometry Testing Unit						1					1
6	Radioactivity Experiment Unit						2					2
7	Ultrasonic wave absorption tester							2				2
8	Multimedia Physiology Teaching system				1			1				2
9	Physiology and Pharmacology teaching, researching equipment									1		1
10	Binocular Microscope						2					2
11	Volumetric Karl Fischer				1					1		2
12	Automatic Titration				1		1			1		3
13	Analgesia Meter with dragging needles								1			1
14	Incapacitation Analgesia Meter IR-Halogen								1			1
15	Activity Cage							1	1	1		3

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Được)	Unit price (USD)	Quantity
16	Blood Pressure Monitor and ECG mice							1	1			2
17	Tensiometer (surface tension)						2					2
18	Analgesic meter on animal's paw				1							1
19	UV-VIS Spectrophotometer							1				1
20	Spectrophotometer								2			2
21	Convulsion Meter							1				1
22	Plethysmo meter on animal's paw				1			1	1			3
23	Metabolism Recording Cage									1	43,000	1
24	Conditioned Stimulus Recording Cage									1	4,500	1
25	Benchtop Centrifuge					2	0				18,500	2
26	High Speed Refrigerator Centrifuge						1				9,000	1
27	UV-VIS Spectrophotometer dual Beam					1	1				14,000	2
28	Digital Ovulation Thermometer						2				7,000	2
29	Rota-Rod Treadmill for mouse				1			1			58,000	2
EQ13	Pathology Practice Equipment											
1	Slide warmer			2				2	2		2,500	6

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Dược)	Unit price (USD)	Quantity
2	Medical Sample Mix and Micro Test System with audio, video recorder (Grossing Table)								1		5,000	1
3	Medical Sample Mix and Micro Test system (Grossing Table)			1							7,000	1
4	Post mortuary instrument set (forensic medicine)				1				1		2,500	2
5	Stained Specimens Drying Shelf								10		8,500	10
6	Microscope with Camera integrated							1			20,000	1
7	Paraffin Embedding System 2 blocks							2			4,500	2
8	Paraffin Embedding System 4 blocks								1		10,000	1
9	Specimen Storage System 2 blocks							2	1		32,000	3
10	Specimen Storage System 4 blocks								1		2,000	1
11	Mobile Samples Fridge								2		3,000	2
12	Specimens Box, upright type								100		3,000	100
13	Specimen Container (chest type)								50		2,000	50
14	Plastic Specimen Folding Container								50			50
15	Microscope with Micromanipulation	1										1
16	Microscope used in Otorhinolaryngology with Camera integrated in microscope							1				1
17	Binocular Microscope for research									1		1

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Dược)	Unit price (USD)	Quantity
18	Bone Sawing Machine with Vacuum Packager								1			1
19	Hybridizer for Molecular Pathology (FISH/CISH)								1		800	1
20	Automatic Slide staining machine		1		1						700	2
21	Tissue Processor with Vacuum Packager								1		1,200	1
22	Paraffin embedding station			1	1						500	2
23	Paraffin incubator 56° C								1		3,000	1
24	Bone processor for histology bank								1		1,200	1
EQ14	Odonto-Stomatology Practice Equipment											
1	Dental unit							15			16,000	15
2	Digital Panoramic X-ray machine			1				1			11,000	2
3	Dental Vibrato							5			8,500	5
4	Model trimmer							4			5,500	4
5	Dental Air Compressor							3			35,000	3
6	X-ray dental							2				2
EQ15	Biochemistry, Immune Laboratory Equipment											

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Dược)	Unit price (USD)	Quantity
1	Automatic biochemistry analyzer 300 test/ hour						1				20,000	1
2	Automatic Immune - Biochemical Analyzer 800/200 test/hour	1	1								14,800	2
3	Automatic immune assay analyzer 100 tests/hour					1					11,000	1
4	Automatic Immune - Biochemical Analyzer 800/100 test/hour							1			3,200	1
5	Automatic immune assay analyzer 200 tests/hour				1						8,000	1
EQ16	Pharmacy Lab Equipment											
1	6 Position Solvent Extraction System				2						350	2
2	Heating mantle 250 ml						4				700	4
3	Heating mantle 50 ml						4				4,000	4
4	Heating mantle 500 ml						4				100	4
5	Automated sample handling system									1	250	1
6	Air Filter									1	2,500	1
7	Integrated system of swaying mixer, granulator low capacity power									1	1,200	1
8	Film coating machine				1						400	1

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Dược)	Unit price (USD)	Quantity
9	Automatic Film Coating Machine						1				1,200	1
10	Tablet press									1	7,000	1
11	Herbal Pill Making Machine				1							1
12	Tablet pressing machine, small size				1							1
13	Reverse osmosis RO machine									1		1
14	Nano Homogenizer, 3 staters						1					1
15	Powder packing machine									1		1
16	Capsule filling machine				1							1
17	Fraction collector									1		1
18	Vacuum suction machine									1		1
19	Antimicrobial and Sterilizing Equipment									1		1
20	High speed stirrers									1		1
21	Laser particle size analyzer						1			1		2
22	Fluid bed and coating machine									1		1
23	Soft capsule moulding machine									1		1
24	Dissolution test apparatus						1					1
25	Efficient Wet Mix and Granulator						1			1		2
26	Colloid Mill									1		1
27	Fermentation Equipment				1						8,000	1
28	Punch tablet press						1				2,000	1

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Được)	Unit price (USD)	Quantity
29	BET absorption meter									1	2,500	1
30	Dielectric constant meter									1	300	1
31	Rheometer									1	1,100	1
32	High pressure homogenizing									1	800	1
33	Fluid bed granulator/ coater						1				120	1
34	Incubator									1	4,500	1
EQ17	Genetics and Histology Laboratory Equipment											
1	Nitrogen Liquid Container with accessories								2		600	2
2	Thermo forma freezer	1										1
3	Vertical Electrophoresis System (mini)					1						1
4	Horizontal Electrophoresis System (maxi) and Power					1						1
5	Horizontal Electrophoresis System (mini)					1	1					2
6	Sperm Counting chamber	1										1
7	DNA Sequencing					1		1				2
8	Hybridization oven					1						1

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Được)	Unit price (USD)	Quantity
9	Automated Blood Culture System								1			1
10	Electroporation System + curvet						1					1
11	Horizontal Shakers					1						1
12	Clean air filter	2										2
13	Sperm analyzer	1										1
14	Ovule injection	1										1
15	8 doors CO ₂ Incubator	1										1
EQ18	LCMSMS/ ESI/APCI System											
1	LCMSMS/ ESI/APCI SYSTEM									2	2,000	2
2	INFRARED SPECTROMETER									1	3,000	1
3	Thin Layer Chromatography System									1	15,000	1
4	GAS Chromatography (GC/FID)							1			3,000	1
EQ19	HPLC Laboratory Equipment											
1	Liquid Chromatography with Triple Quadruple Mass Spectrometer							1			15,000	1
2	High performance pressure liquid chromatography-HPLC					1	2				8,500	3

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Được)	Unit price (USD)	Quantity
3	Ultra Performance Liquid Chromatography system -UPLC (UHPLC)						1				38,000	1
EQ20	Experiment Desk Interior Lab Equipment											
1	Wall bench with reagent rack							5			260,000	5
2	Wall bench without reagent rack 4,8m							5				5
3	Wall bench without reagent rack 6,6 m							6				6
4	Chemistry table with hood and water tap and sink						24					24
5	Island bench with water tap and sink							6				6
6	Island bench without water tap and sink with reagent rack							6				6
7	Island bench without water tap and sink without reagent rack							11				11
8	Diagnostic and Quality control table		5									5
9	Chair for lecture theater							500				500
10	SUS lab rotary stool							500				500
11	Microscope storage cabinet							10			120,000	10
12	Wall bench 6,9m with water sink and tap, Adjustable Pegboard								4		15,000	4

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Được)	Unit price (USD)	Quantity
13	Wall bench 3,6m								6		75,000	6
14	Wall bench 1,8m								5		3,000	5
15	Wall bench 1,2m with water sink and tap, Adjustable Pegboard								4		3,000	4
16	Undertable cabinet, type: two drawers and two doors								10		35,000	10
17	Undertable cabinet, type: a drawer and a door								10		18,000	10
18	Book Shelf							20			2,500	20
EQ21	Haematology Lab and Histology Equipment											
1	Seitz filter	1									260,000	1
2	Automatic Colony counter			1							120,000	1
3	Machine for identification of bacteria	1									15,000	1
4	Flow Cytometer								1		75,000	1
5	Fully automated coagulation analyzer		1								3,000	1
6	Digital Orbital Shakers	1									3,000	1
7	Electrolyte Analyzer								1		35,000	1
8	Automatic urine analyzer		1								18,000	1
9	Automatic urine analyzer 10 parameters	2				1			1		2,500	4

No.	Lot description	Nam Định	Hai Dương	Thai Bình	Hai Phong	Đa Nang	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Được)	Unit price (USD)	Quantity
10	Haematology Analyzer ≥ 42 parameters		1									1
11	Haematology Analyzer ≥ 26 parameters	1									15,000	1
12	Semi-Automated Biochemical Analyzer					1		1	2		4,000	4

Source: HHRSDP, Procurement Unit

Table 8.3: Phase three equipment allocation for 9 HPTF

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Y)	Hà Nội (Được)	Unit price (USD)	Total
EQ 22	Practice Equipment for Odonto Lab											319
1	Manual press						2				3,500	2
2	Compress						40					40
3	Pneumatic chisel						2					2
4	Polish lathe						4					4
5	Electropolisher						2					2
6	High frequency induction casting machine						1					1
7	Laser pin setter						1					1
8	High speed alloy grinder						20					20
9	Model trimmer						3					3
10	Dental unit with simulator						25					25
11	Sand blaster						2					2
12	Vacuum mixer						2					2
13	Micromotor max speed 50.000 rpm						35					35
14	Micromotor max speed 35.000 rpm						80					80
15	Surveyor						15					15
16	Flask						80					80

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
17	Air/water pressure curing un						2					2
18	Dental Air Compressor						3					3
EQ23	Nursing skill Model											318
1	Traning unit for Intesive care unit and critical care skill						1				2,500	1
2	Upper and Lower Stump Bandaging Simulators						3				5,000	3
3	One Year Injection Training Arm Model						1				7,000	1
4	Five Year Injection Training Arm Model			1							2,500	1
5	Infant CRiSis Manikin						1				8,500	1
6	Blue Neonatal Simulator with SmartSkin Technology			1							20,000	1
7	The patient simulation manikin with accessories					1					4,500	1
8	Diagnostic Peritoneal Lavage Trainer			1							10,000	1
9	Heart Catheterization Simulator			1			1				32,000	2
10	Pneumothorax Training Manikin			1			2				2,000	3
11	Pediatric Lumbar Puncture Simulator			1							3,000	1
12	Auscultation Manikin with Amplifier/Speaker System			2							3,000	2
13	Uterus Model							6			2,000	6
14	Airway Management Trainer Head							5				5
15	Adult Airway Management Trainer with Stand			4								4

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
16	Airway Trainer 1 year			1								1
17	Airway Trainer 5 year			1								1
18	Child Airway Management Trainer with stand			2			1					3
19	Airway Trainer Newborn			1							800	1
20	Childbirth simulator			1							700	1
21	OB simulator			1							1,200	1
22	Male and Female Genital Models			1							500	1
23	Manikin with Memory and Printer			1							500	1
24	CPR Manikin with Electronics			2							500	2
25	Condom Training Model						1				500	1
26	Female Condom Model						1				500	1
27	Testicular Exam Simulator							6			500	6
28	Clinical Male Pelvic Trainer			1			1				500	2
29	Pelvic Examination Simulator						1				500	1
30	Gynecologic Simulator			1							500	1
31	Palpation Module for Leopold Maneuvers							4			500	4
32	The Virtual Reality Vaginal Exam Model						1				500	1
33	Inspection and palpation of breast cancer training model			1							500	1

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
34	Suture Kit			2							500	2
35	Arterial Puncture Arm						1				500	1
36	Cricothyrotomy Simulator			2							500	2
37	Heart and Lung Sounds Simulators (1-5 years old)			2							500	2
38	Patient Care Simulator						1				500	1
39	Human Embryo and fetus development (1 - 9 months)			1							500	1
40	NG Tube and Trach Skills Simulator							2			500	2
41	Rectal Examination Model						1	4			500	5
42	External cephalic version model (ECV)			1							500	1
43	Torso, Adult Airway Management Trainer			4							500	4
44	Bandaging Simulator						1				500	1
45	Suture Practice Arm			2			1				500	3
46	Male Catheterization Model			1				4			500	5
47	Female Catheterization Model			2				4			500	6
48	Simulator, 1 year			1							500	1
49	Simulator, 5 years			1							500	1
50	Newborn simulator			1							500	1
51	Episiotomy & Perineal Laceration Trainer			4							500	4

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
52	Acupuncture Training Model							2			500	2
53	Advanced GERi Manikin			2							500	2
54	Basic KERi Manikin						2				500	2
55	CRiSis Manikins with defibrillation						1				500	1
56	Gynaecological Examination Simulator			2							500	2
57	GYN Trainer (4 sets)						1				500	1
58	Nasogastric Tube Feeding Model						1				500	1
59	Enema Administration Simulator			2			0	4			500	6
60	Intramuscular injection simulator						1				500	1
61	Spinal Injection Simulator						1				500	1
62	Venipuncture and Injection Training Arms with accessories			5			1				500	6
63	Intramuscular Injection Simulator			4							500	4
64	Intravenous Injection Training Arm			4				4			500	8
65	Pediatric Injection Training Arm						1				500	1
66	Intradermal Injection Simulator			5							500	5
67	Pediatric Care Simulator, 1 and 5 year			1							500	1
68	Accupuncture model							2			3,000	2
69	Infant Endotrachea Intubation Model							4				4

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
70	5 teeth model, 8 x real size							2				2
71	Torso with Head and Open Back, 20 parts							4				4
72	Torso with Head and Interchangeable Male and Female Genitalia (20 parts)							4				4
73	Human Muscular Skeleton							4				4
74	Urinary Organs, 4 parts							4				4
75	Functional Model of Larynx, 2.5 x life size							2				2
76	Right Kidney Model							4				4
77	Bronchial Tree							4				4
78	Stomach Model, 2 parts							4				4
79	Torso with Head and Neck, 19 parts							4				4
80	Thoracic Spinal Column							8				8
81	Liver Model							12			3,000	12
82	Rear Organs of the Upper Abdomen							12			3,000	12
83	Functional Hip Joint							4			3,000	4
84	Functional Elbow Joint							4			3,000	4
85	Functional Shoulder Joint							4			3,000	4
86	Labyrinth with Ossicles and Tympanic Membrane, 3 parts, 4x life size							4			3,000	4
87	Brain with Arteries, 9 parts							8			3,000	8

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
88	Brain Model, 15 parts							8			3,000	8
89	Brain Model, 4 parts							4			3,000	4
90	Eye with Part of Orbit, 9 parts, 3x life size							2			3,000	2
91	Artificial Human Skull, 2 parts							4			3,000	4
92	Artificial Human Skull, 14 parts							4			3,000	4
93	Artificial Human Skull, 3 parts							4			3,000	4
94	Ear Model, 6 parts, 3X life size							2			3,000	2
95	Larynx and Trachea, 2 parts							4			3,000	4
96	Larynx Model, 2 parts							4			3,000	4
97	Median Section of the Male Pelvis, 4 parts							7			3,000	7
98	Median Section of the Female Pelvis, 2 parts							8			3,000	8
99	Median and Frontal Section of the Head			4				4			3,000	8
100	Anatomical Sectional Model of the Head (combined with corresponding MR-Figures)							4			3,000	4
101	Benchtop Heart, Lung Model, 2 parts							2			3,000	2
102	Heart model, 2 parts, 3/4 life size							4			3,000	4
103	Human Anatomy 3D simulator					1					3,000	1

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Y)	Hà Nội (Dược)	Unit price (USD)	Total
EQ 24	Pre-Clinic Practice Equipment of Function Examine											21
1	Portable Doppler Ultrasound, 3 probes						1				16,000	1
2	Spirometer	1									11,000	1
3	Portable transcranial doppler							1			8,500	1
4	Bone density analyzer X-ray (DEXA)							1			5,500	1
5	Tympanometer, Middle Ear Analyzer							1	0		35,000	1
6	ACOUSTIC RHINOMETRY							1				1
7	Clinical Audiometer							1	1			2
8	Vocal Stimulation Master						1				20,000	1
9	Gastroendoscopy (2 gastric, 1 colon)		1								14,800	1
10	Doppler Ultrasound 4 D, 4 probe	1									11,000	1
11	Stroboscope Machine							1			3,200	1
12	Dental Drill Bits and Shaper							1			8,000	1
13	Middle Ear Micro Instruments							1				1
14	Micro Instrumnets for Larynx - holder support							1			350	1
15	Cabin IAC Mini 250							1			700	1
16	Hematocrit centrifuge							1			4,000	1
17	Vacutainer® Venous Blood Collection							1			100	1
18	C13 Urea Breath Test							1			250	1

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
19	ENT endoscope 250W						1				2,500	1
20	ENT Endoscope Light Halogen Twin								1		1,200	1
EQ 25	Practice Equipment of Traditional Medicine										400	36
1	Hemaplegia Recovery Instrument								2		1,200	2
2	Single-effect Concentrator						1				7,000	1
3	Multipurpose exercising System								2			2
4	Sterilisant Liquid Making System						1					1
5	Electrotherapy unit								2			2
6	Multi-Frequency Ultrasound			1								1
7	Shortwave therapy unit								2			2
8	Soothe Arthrosis pain								2			2
9	Spinal Bending Ruler								1			1
10	Disintegration Tester						1					1
11	Bottle Sealing Machine						1					1
12	Herb Decoction Packing						1					1
13	Spinal Stretch Device						1					1
14	Electric traction system for neck, chest, back			1								1
15	Back and Neck Spine stretch equipment								2			2
16	Automatic Decocting Mixing and Packing Machine, 3 pots								2			2
17	Medicine herb decoct-extractor						1					1

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
18	3 horizontal axes Herbal Pill Making Machine						1					1
19	Ultrasound therapy unit								2		8,000	2
20	Oscillating Granulator Machine						1				2,000	1
21	Fumigation treatment machine (part)								2		2,500	2
22	Fumigation treatment machine (body)								2		300	2
23	Extruder - spheronizer system									1	1,100	1
24	Pulsed and Continuous Shortwave Unit with 2 holding arms			1							800	1
25	Fractional CO2 Unixel RF			1							120	1
26	Animal cage system for experiment						1				4,500	1
EQ 26	Pre-Clinic Practice Equipment of Surgery and Treatment											32
1	Operating table		1									1
2	Automatic Syringe Pump		2							2		4
3	Automatic Infusion pump		2				1					3
4	Surgical scrub station		1									1
5	HF Electro surgical unit		1									1
6	Infant phototherapy lamp (LED)			2								2
7	Endotracheotomy instrument set		2									2
8	Operating light with 2 bulbs		1									1
9	Laparoscope System								1			1

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
10	Newborn incubator			2								2
11	Enteral Feeding Pump			2								2
12	Anesthesia apparatus with ventilator		1									1
13	Infant Warmer (newborn Incubator)			2								2
14	Stable Instantaneous FHR (Fetal Heart Rate)			1								1
15	Disinfection Solution Spraying Apparatus		1									1
16	Oxygen concentrator 5l/m			2								2
17	Fetal Actocardiograph 2 function			1								1
18	Ventilator		1									1
19	Bedside monitor with 5 parameters								1			1
20	Bedside monitor with 6 parameters						1					1
21	Bedside monitor with 7 parameters		1									1
EQ 27	Environmental Analysis Lab Equipment											56
1	Hygro-Thermometer Psychrometer						1					1
2	Aqua Tester kit						1					1
3	Microbiological Analyzing Set								1			1
4	Meter Kit with BOD Probe						1					1
5	Meter Kit with pH Electrode						1					1
6	Dust Monitor			1								1
7	Soil Analyzer								1			1
8	Hand Press Dynamometer								3			3

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà nội (Ý)	Hà nội (Được)	Unit price (USD)	Total
9	Portable Ambient Dust Meter								2			2
10	Colony Counter								1			1
11	Circulating Temperature Adjuster								1			1
12	Thermo Raido Meter						1		2			3
13	Personal Dust Meter								2			2
14	Mass Particle Counter/Dust Monitor			1								1
15	Electromagnetic Meter								1			1
16	Vibration Meter						1					1
17	Gas Sample Drawing Monitor						1					1
18	Fat Analyzer						1					1
19	Sound level meter			1					1			2
20	Radioactive Meter								1			1
21	Visual Acuity Meter								1			1
22	Heat block								1			1
23	Amiang Dust Collector						1		2			3
24	Cotton Dust Collector						1		2			3
25	Air sampler collector			1								1
26	Low speed air collector								3			3
27	BOD analyzer			1			1		1			3
28	Complete Water Quality Lab			1			1		1			3

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
29	COD analyzer			1					1			2
30	Automated Pour Plate Application								1			1
31	Integrating Sound Level Meter with Real Time Frequency Analysis						1					1
32	Energy Value Analyzer						1		1			2
33	Real time vibration Analyzer						1					1
34	Martin anthropometric measurement								4			4
EQ 28	Practic Laboratory Equipment											75
1	Water Bath						7					7
2	Technical Balances 10-1							1				1
3	Technical Balances 10-2			14								14
4	Analytical Balances 10-4			19								19
5	Analytical Balances 10-5									1		1
6	Infrared Moisture Analyzer						1					1
7	Gel Transimulator							3				3
8	UV-Transimulator						1					1
9	double water destilation aparatus					3						3
10	Vacuum Rotary Evaporator 5lit						1					1
11	Turbidity Colorimeter/Photometer							1				1
12	Viscometer							1				1
13	pH meter						1					1

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà Nội (Ý)	Hà Nội (Được)	Unit price (USD)	Total
14	Ultrasonic homogenizer				1		1			1		3
15	Magnetic Stirrer						2					2
16	Thermo mixer					1						1
17	Vortex Mixer							1				1
18	Ultrasonic cleaner					1						1
19	Homogenizer						1					1
20	Dry block Heater						1					1
21	Vortex shaker 1 sample						1					1
22	Incubator					2						2
23	Fridge						4					4
24	Drying oven					3						3
25	Vacuum Drying oven					1						1
26	Vacuum pump					1						1
27	Power source					1						1
EQ 29	Equipment of Lecture Hall											107
1	Common Barcode Reader							2				2
2	Barcode Printer							1				1
3	Audio System for lecture room					6						6
4	High speed printer					1						1
5	TV LCD 40", display notice					1						1
6	Cammera System				1							1

No.	Description	Nam Định	Hải Dương	Thái Bình	Hải Phòng	Đà Nẵng	Hồ Chí Minh	Cần Thơ	Hà nội (Y)	Hà nội (Được)	Unit price (USD)	Total
7	Interaction board						1					1
8	LAB for foreign language teaching (32 students)						1					1
9	Monitor LED 90"							2				2
10	Desktop computer				35		35					70
11	Laptop						12					12
12	Projector						3					3
13	Dehumidifier						1					1
14	Scanner						2					2
15	Laser printer						3					3

Source: HHRSDP, Procurement Unit

APPENDIX 9: COST DATA

Table 9.1: Allocation of Loan and Grant Funds – Original (PAM 2011) and at June 30 2015 (\$m)

Item	ADB Loan Allocation			Grant – DFAT Allocation			GOV Allocation			TOTAL		
	PAM (2011)	Current	% Variation	PAM (2011)	Current	% Variation	PAM (2011)	Current	% Variation	PAM (2011)	Current	% Variation
1. Work	1.10	1.09	-0.6%				0.12	0.12	1.3%	1.22	1.22	-0.4%
2. Equipment	16.24	16.14	-0.6%	0.05	2.85	5600.0%	1.81	1.81	0.2%	18.10	20.81	14.9%
3. Workshops and Studies	3.29	3.29	0.0%				0.31	0.29	-6.7%	3.60	3.58	-0.6%
4. Education and Training	5.40	4.69	-13.1%				0.54	0.34	-37.7%	5.94	5.03	-15.4%
5. Consulting Services				5.14	3.50	-31.9%	0.03		-100.0%	5.17	3.50	-32.3%
6. Health Professional Registration System Establishment: Operational Funding	0.96	0.84	-12.8%	3.01	2.82	-6.3%	0.02	0.08	301%	3.99	3.74	-6.3%
7. Project Management	1.83	1.96	7.0%				0.16	0.21	30.6%	1.99	2.17	8.9%
8. Project Management for Care Pathway Pilot				0.47	0.65	39.1%	0.03	0.04	29%	0.50	0.69	38.5%
9. Capacity Building for Care Pathway Pilot				0.67	0.83	23.7%	0.06	0.04	-29%	0.73	0.87	19.4%
Sub Total (Base Costs)	28.81	28.01	-2.8%	9.34	10.65	14.0%	3.08	2.93	-5%	41.24	41.59	0.9%
Fees/ Charges	0.45	0.74		0.25	0.25							
Unallocated	0.74	1.25		1.41	0.10		2.23	2.38		4.09	3.74	
TOTAL	30.00	30.00		9.59	11.00		5.31	5.31		45.33	45.33	

Source: HHRSDP, Finance Unit

Table 9.2: Total contract awards and disbursements by category (Loan and Grant)

Item	Final Allocation (Budget)	Disbursed at 15 May 2015	Planned Disbursements at 31/12/15	Undisbursed budget at 31/12/15	Uncommitted Budget
Base Cost					
1. Work	1.09	0.84	1.09	0.000	0.00
2. Equipment	18.99	12.82	16.61	2.380	2.50
3. Workshops and Studies	3.29	1.33	3.00	0.289	0.02
4. Education and Training	4.69	2.07	4.68	0.008	0.00
5. Consulting Services	3.50	2.20	3.50	0.003	0.00
6. Health Professional Registration System Establishment: Operational Funding	3.66	1.03	3.58	0.073	0.00
7. Project Management	1.96	1.25	1.78	0.174	0.00
8. Project Management for Care Pathway Pilot	0.65	0.31	0.65	0.000	0.00
9. Capacity Building for Care Pathway Pilot	0.83	0.45	0.83	0.000	0.00
Total (Base Costs)	38.66	22.30	35.73	2.93	2.52
Unallocated	1.35			1.35	1.35
Total (excluding finance charges)	40.01	22.30	35.73	4.28	3.86
Finance charges	0.99				
TOTAL	41.00				

Source: HHRSDP, Finance Unit

Table 9.3:Contract awards and disbursements by category (Grant)

Item	Final Allocation (Budget)	Disbursed at 15 May 2015	Planned Disbursements at 31/12/15	Undisbursed budget at 31/12/15	Uncommitted Budget
Base Cost					
1. Work		0.00		0.000	0.000
2. Equipment	2.85	2.73	2.85	0.000	0.000
3. Workshops and Studies		0.00		0.000	0.000
4. Education and Training		0.00		0.000	0.000
5. Consulting Services	3.50	2.20	3.50	0.003	0.003
6. Health Professional Registration System Establishment: Operational Funding	2.82	0.76	2.82	0.002	0.002
7. Project Management		0.00		0.000	0.000
8. Project Management for Care Pathway Pilot	0.65	0.45	0.65	0.000	0.000
9. Capacity Building for Care Pathway Pilot	0.83	0.31	0.83	0.000	0.000
Total (Base Costs)	10.65	6.45	10.65	0.005	0.005
Unallocated	0.10			0.099	0.099
Total (excluding finance charges)	10.75	6.45	10.65	0.104	0.104
Finance charges	0.25				
Total	11.00				

Source: HHRSDP, Finance Unit

Table 9.4: Total disbursements against elapsed project period (\$m)

Dates	Cumulative Disbursed	Cumulative % Disbursed	Elapsed Project Period (months) ^a	% Elapsed Loan Period
31 December 2011	0.21	0.5%	12	18%
31 December 2012	1.44	3.6%	24	36%
31 December 2013	5.06	12.7%	36	55%
31 December 2014	10.57	26.4%	48	73%
31 December 2015 (estimated)	35.73	89.3%	60	91%
Undisbursed at 31/12/2015	4.28	10.7%		
30 June 2016	N/A		66	100%
Total (excluding finance charges)	40.01			

Source: HHRSDP, Finance Unit

Notes:

^a From date of loan effectiveness – 6 January 2011

Table 9.5: Grant disbursements against elapsed grant period (\$m)

Dates	Cumulative Grant Disbursed	Cumulative% of Grant Disbursed	Elapsed Project Period (Months)^a	% Elapsed Loan Period
I. Dates				
31 December 2011	0.07	0.7%	12	22%
31 December 2012	0.80	7.4%	24	44%
31 December 2013	1.33	12.4%	36	67%
31 December 2014	1.34	12.5%	48	89%
15 May 2015	6.45	60.0%	54	100%
31/12/2015 (estimated)	10.65	99.1%		
Uncommitted/Undisbursed	0.1	0.9%		
Total (excluding finance charges)	10.75			

Source: HHRSDP, Finance Unit

Notes:

^a From date of loan effectiveness – 6 January 2011

APPENDIX 10: PHYSICAL IMPLEMENTATION STATUS

Table 10.1: Project implementation status by component

Component/Sub-component	Completed by 31/12/2015	Requires extension
1.A Strengthened coordination, and planning of human resources policy	58%	42%
1.B Strengthened mechanism for the registration and licensure of health professionals	72%	28%
1.C Project Management Unit	74%	26%
2.A Support for strengthening health professional training facilities	96%	4%
2.B Support for strengthening health professional training quality control	90%	10%
2.C Support for Health Workers in Remote and Ethnic Minority Areas	100%	0%
2.D Consulting Services	94%	6%
3.A Support for a Clinical Pathway and Payment Reform (PPR) Unit	100%	0%
3.B Support for Provider Payment Policy Reform	89%	11%
3.C Capacity Building in Clinical Pathway Development	91%	9%
3.D Capacity Building in Costing and Hospital Cost Management	100%	0%
Total	85%	15%

Source: HHRSDP, Planning Unit

APPENDIX 11: PROGRAM IMPACT

Table 11.1: IMR for 20 poorest provinces against the 2012 and 2015 targets

Province	2010 ^a	2012 ^a	2013 ^a	2015
Target		15.4^b		14.8^c
National	15.8	15.4	15.3	
Hà Giang	37.1	35.8	35.3	
Cao Bằng	28.2	25.2	25.1	
Lào Cai	31.6	30.3	30.2	
Yên Bái	26.5	29.6	29.4	
Bắc Kạn	19.5	18.7	18.5	
Bắc Giang	16.7	16.0	15.8	
Phú Thọ	18.2	15.8	15.8	
Sơn La	25.6	24.5	24.0	
Lai Châu	46.1	44.2	44.0	
Điện Biên	37.3	35.8	35.5	
Thanh Hóa	15.0	16.2	16.0	
Nghệ An	16.8	17.4	17.4	
Quảng Bình	18.1	18.0	17.8	
Quảng Trị	36.0	33.8	33.5	
Quảng Ngãi	18.0	18.9	18.8	
Quảng Nam	19.5	17.4	17.5	
Bình Định	15.2	16.0	15.9	
Ninh Thuận	18.8	17.4	17.2	
Kon Tum	38.1	40.0	40.0	
Lâm Đồng	14.5	16.5	16.5	

Source:

^a General Statistics Office. *Statistical Yearbook of Viet Nam 2013*. Ha Noi.

^b MoH. 2013. *Joint Annual Health Review 2013*. Ha Noi.

^c M0H. 2011. *Five year health sector plan for the period 2011-2015*. Ha Noi.

APPENDIX 12: SUSTAINABILITY DATA

Table 12.1: Budget for Equipment Maintenance and Consumables
(Facilities Receiving Equipment from the Project Loan ^a)

	Total Annual Operating Budget	Total Asset Value - Equipment	Annual Budget - Maintenance	Maintenance (% Of Total Budget)	Maintenance (% Of Asset Value)	Annual Budget - Consumable	Consumable (% Of Total Budget)
HCMC University of Medicine and Pharmacy ^b							
	317,240,641,409	281,059,149,671	1,113,156,357	0.4%	0.4%	10,481,237,610	3.3%
Can Tho University of Medicine and Pharmacy							
	222,378,192,572	91,905,435,606	419,265,490	0.2%	0.5%	14,820,321,065	6.7%
Da Nang University of Medical Technology and Pharmacy							
	69,523,405,642	86,491,202,534	287,081,000	0.4%	0.3%	2,149,520,553	3.1%
Ha Naoi Medical University							
	260,185,164,036	11,449,789,607	4,500,000,000	1.7%	39.3%	11,402,795,370	4.4%
Ha Noi Pharmacy University							
	112,208,006,591	131,920,640,686	561,399,250	0.5%	0.4%	3,791,602,291	3.4%
Hai Duong Medical Technical University ^b							
	29,384,603,744	41,028,848,235	87,812,000	0.3%	0.2%	1,285,144,485	4.4%
Thai Binh University of Medicine and Pharmacy ^b							
	188,779,428,891	102,816,643,067	1,528,874,300	0.8%	1.5%	1,527,528,731	0.8%
Nam Dinh University of Nursing ^b							
	67,400,000,000	45,654,000,000	500,000,000	0.7%	1.1%	2,200,000,000	3.3%

Source: HHRSDP, M& E Consultants

Notes:

^a Data unavailable for Hai Phong Medical and Pharmacy University

^b 2013 Data

APPENDIX 13: GENDER DATA

Table 13.1: Implementation status of the GEMS at 31 May 2014 (with updates at June 2015)

Output	Measures to Address Gender and Ethnic Minority (GEM) Concerns	Responsibility	Implementation Status as reported in PMU MTR 31 July 2013	Implementation Status as found by International Consultant in May 2014	Status by June 2015
1. Better Planning and Management of Human Resources					
Policy Measures					
	Socioeconomic analysis, including gender, EM and poverty impacts, of the Law on Examination and Treatment (LET), is completed and submitted to the Prime Minister.	MOH/DHL, MOH/DST and HHR Committee	Law on examination and treatment (LET) issued on 23/11/2009 and effective in 1/2011, In LET, there are in Article No. 4; No. 9 and No.86 these are specific to mention on Gender and EM	LET contains a general principle of equal access to treatment as well as a principle of budget and resources allocation for poor areas.	Licensing by the end of 2014: Female: 151531 (66%) Male: 77107 (34%) Kinh: 194103 (84%) EM: 35941 (16%) Total: 230044 (100%)
	Ensure gender balance in the Joint Committee on health human resources (HHR Committee) secretariat at all levels		HHR Committee established and completed including 17 members, 11.76% female (2/17) and the secretariat panel have 4 member, 75% female (3/4)	HHR Committee very gender imbalanced, JC Secretariat gender overbalance with 75% women but with male Head. Recruitment of new members for JC is ongoing, leading to a new ministerial decision of the JC establishment.	Decision 3651/QD-BYT dated 16 September 2014: HHR Committee consists of 16 males and 4 females, JC Secretariat consists of 3 males and 4 females. More female participation in JC Committee and Secretariat is the direct result of recommendation of the national gender consultant to the leaders of MOH.
	Develop measures to improve the gender balance at senior levels of MOH and in provincial health departments with a target increase of at least 10% by 2013		- - -	This issue appears not to have received any attention. According to oral information from CFAW, the proportion of female leaders has increased, however the Consultant could not verify this with data from MOH.	At the end of 2014 within the MoH: <ul style="list-style-type: none"> 6.3% of Department Heads are women 15.8% of Department Heads and Vice Heads combined are women At the end of 2014 within Provincial DoHs (62 provinces)

					<ul style="list-style-type: none"> • 12.9 % of Department Heads are women • 20.0% of Department Heads and Vice Heads combined are women <p>Decision 1730/QD-BYT dated 08 May 2015 on Instructions for planning senior positions in health sector specifically put the indicator to achieve no less than 15% women among planned leaders, and increase EM among leaders at all levels;</p>
Project Activities					
	Integrate gender and EM concerns in HHR Committee's terms of reference, HHR framework, work plan, monitoring system and budget	PMU and HHR Committee secretariat	Under development	GEM issues have so far not been specifically recognised.	Gender and EM have been integrated into monitoring system of the project components and database of Department of Personnel.
	HHR Committee report includes recommendations on (i) improving compensation, benefits and other incentives for district and commune health staff especially women in remote/EM areas; (ii) effectively integrating population/family planning workers at all levels for health promotion activities; (iii) improving the qualifications, status and compensation of village health workers and other health collaborators; (iv) extending health services to EM areas (e.g., through mobile teams); and (v) measures to improve the	PMU and Committee secretariat	Under development	<p>HHR Committee Consultant report submitted in 2013, identifying problems and giving some recommendations for policy development for HHR development in remote areas.</p> <p>Gender issues not assessed.</p>	<p>Issued POA No. 329/KH-BYT dated 26 April 2013 for advancement of women in health sector.</p> <p>Decree No. 08/CT-BYT dated 21 June 2013 for promotion of gender equality.</p> <p>Decision 5438/QD-BYT on POA for implementation of Resolution 05/NQ-CP on 13 January 2014 for promotion of implementation millennium development goals in health sector, which emphasized maternal and child health.</p> <p>Directive No. 01/CT-BYT dated 09 January 2015 promoting health care for mothers and newborn to reduce maternal and child mortality.</p> <p>A series of policy documents</p>

	gender balance at senior levels of MOH and in provincial health departments.				<p>promoting health care in remote areas (such as Document 1121/TB-BYT dated 06 Nov 2014 on promoting quality health care for Northern mountainous provinces) mentioned about maternal and child health, sex-selective abortion, child marriages, but gender is not explicitly mentioned.</p> <p>MOH is preparing Draft of Government Decree for policy promoting health care for poor EM women in remote areas (Report 1079/BC-BYT 22 Oct. 2014).</p> <p>Decision 3318/QD-BYT dated 12 Sept 2012 on the set of indicators for gender equality in health sector to monitor progress.</p> <p>Manual on activities for advancement of women in health sector had been prepared and circulated among MOH units guiding gender equality activities in health sector.</p>
	Provide gender and EM specialist support to the Joint Committee, including training on gender and EM issues.	PMU and Secretariat HHR Committee	Project has engaged an international and a national gender and EM specialist to work on these issues throughout the project time.	International Consultant provided clear GEMS implementation guidelines in May 2012. National Consultant has been absent and failed in providing any support and training.	The national consultant had met in person with the Chair of JC and 5 members of JC to discuss about promoting gender equality in project implementation, especially to include more women in the JC and other project activities;
	Assist MOH Departments Personnel and Planning/Finance (Health Statistics and Informatics Division) to improve collection of sex and ethnicity-disaggregated data on the health workforce at all levels (including staffing,	Secretariat HHR Committee , MOH/DOP	On going	MOH Dept of Manpower is in the process of developing the existing monitoring system with inclusion of gender and ethnicity indicators in data from province level monitoring.	Gender and EM disaggregated data have been implemented in project database, Department of Personnel and Department of Planning and Finance.

	in-service training, compensation and promotion)				
	Include gender and EM concerns in socioeconomic impact studies of the draft LET and implementing decrees.	MOH/DHL	In LET, there are in Article No. 4; No. 9 and No.86 these are specific to mention on Gender and EM.	The LET articles mention in general equality in access to treatment. It also mentions budget allocation to remote and poor areas. LET is just being implemented and no impact studies have been undertaken yet.	MOH is preparing Draft of Government Decree for policy promoting health care for poor EM women in remote areas (Report 1079/BC-BYT 22 Oct. 2014);
	Promote that the LET includes provisions for rights to be treated with respect regardless of sex, ethnicity, age, and sexual orientation, and to be treated by a medical practitioner of the sex of the patient's choice whenever possible.		In LET, there is in Article No. 9	LET article 9 stipulates the right to be respected without distinction based on sex, ethnicity, age, religion, or social status. LET was issued 2009, i.e. before the Project started. The Project appears not to have any specific activity promoting awareness of the equality content and the patient's right of choice. Project provides training in LET for health practitioners but no public awareness raising.	MOH contributed to the Law on changes and revisions of the Law on Health Insurance dated 13 June 2014, according to which HI for children under 6, poor and EM people in remote areas is paid by the government even if they go to higher level of facilities without referral (Articles 12 and 22).
	Support women and EM targeted public awareness programs on the LET (patient rights) and consumer complaint system using appropriate language, communication methods and networks.	MOH/DHL	Will be developed with support of gender consultant	According to the PMU Component 1B Coordinator with staff, public awareness information to patients, such as EM and remote areas is not part of the project.	
	LET monitoring system will include gender and ethnicity-related indicators and all data will be disaggregate by sex and	MOH/DHL	Will be developed	LET application forms as according to the LET ordinances include no notion of gender or ethnicity of the applicant. Only Annex 10	

	ethnicity			Form of Certificate of Practice Time include the title Mr/Mrs. However, the online registration system currently used by hospital administrators for registering staff allows gender and ethnicity data.	
2. Higher Quality Human Resources Training					
Policy Measures					
	MOH to complete a policy impact review on increasing enrollment of EM students in health training, including the implementation of Decree 134 and Circular 13 with recommendations to address constraints.	MOH/DST training institutions; Provincial health departments	Under preparation	Project prepared a report in 2013 on the impact of special entry programmes for EM students based on data from 34 provinces from the Ministry of Education. New survey will be conducted in 2015.	
	MOH to direct all provincial health departments to submit an in-service training plan and budget for women and EM district and commune health staff, and village health workers.		Under preparation	Through contracting Thai Nguyen MU the project has developed 6 training modules for village and commune health workers. Medical training institutes PIUs will undertake piloting implementation from June 2014 until the end of the year.	6 training modules had completed. TOT workshops had been organized in April 2013 in the North and the South, and starting from June 2014 the modules have been used for training EM in 11 out of 17 PIUs where there are EM students.
Project Activities					
	Training needs analysis of teachers and managers to include separate section on specific needs of women and EM teachers.	MOH/DST	Assessment ongoing	A national consultant is undertaking training needs analysis.	National consultant had visited and worked with 6/17 participating universities in Hai Duong, Hai Phong, Hanoi, HCMC to raise gender awareness, to advice the PIUs to integrate gender into regular training, and provide gender materials for references for teaching purposes.
	Ensure 40% women's representation in training	PMU and training institutions	Over 50%	Female representation good in training activities because	By July 2014, number of graduate students (MA and Ph.D.) supported by

	programs or at least proportionate to their representation in the relevant trainee pool.			many nurses trained; nursing a typically female sector.	the project in all PIUs include 59 males and 124 females (67.8%). Data provided by PIUs show high proportion of women in all types of training (often over 50%);
	Reserve 40% quota for women teachers in study-tours to Universities in ASEAN region and teacher exchanges.	MOH/DST	PMU select scholarship holders for abroad training, gender quotas applied in selection. Women teachers in study tours to Universities in ASIAN region: the rate is 61.3% (46 females/76 total person)	PMU select scholarship holders for abroad training, gender quotas applied in selection.	
	Ensure 10% EM representation in training programs or at least proportionate to their representation in the region served by the relevant training program.	PMU and training institutions	EM representation in training programs or at least proportionate to their representation in the region served by the relevant training program	Can be verified with data in the gender and ethnicity disaggregated project monitoring forms developed in May 2014.	EM are present in a few PIU, for example, in Medical and Pharmaceutical University of Can Tho in 2014, 508 EM students received fellowship from the project, among which 272 are women (53.5%), and 805 Kinh students (EM students account for 38.7%);
	Establish a quota of at least 50% of scholarships funded by the program for pre-service or in-service training are given to women.	MOH/PMU	PHD scholarship: 60% (8 female/20 total) Master scholarship: 72.8% (67 females/92 total)	PhD scholarships: 40% female (wrong reporting from PMU)	Up to 30 July 2014, 124 female and 59 male from 17 PIUs received scholarships for MA and Ph.D.
	Ensure that any age limits for training supported by the program are the same for men and women.	PMU and MOH/DST	No age limits different for men and women	PMU declares no age limits are applied.	PMU declares no age limits are applied.
	Ensure that support for training of nurses and midwives is prioritized.	MOH/DST	Nurses and midwives are given priority for appropriate training (i.e. training in Thailand)	To be verified by project monitoring data.	Among 183 graduate students receiving scholarships, 30 of them (22 are women) are studying nursing (27 in Thailand)
	Ensure that updating of medical curricula conform to the new National Standards and Guidelines on	MOH/DST	----	According to Component 2 Coordinator medical curricula update is not a project activity	

	Reproductive Health				
	Integrate training on preventing/addressing domestic violence in pre-service training for health professionals.	MOH/DST and training institutions	Included in training curriculum		
	Support new training program for population/family planning workers especially females and EMs at province, district and commune levels.	MOH/DST and MOH/ Population Bureau	Under consideration	Included in the 6 short course in-service training modules developed by Thai Nguyen Medical University.	Materials for 6 training modules are completed.
	Design short modules in-service training courses for female health workers with family responsibilities and for health workers posted to remote areas, so that credit can be accumulated over time.	MOH/DST	Project signed Thai Nguyen Medical University to develop 6 short course in-service training modules.	The 6 modules developed by Thai Nguyen MU will be piloted from June until end of 2014.	Implemented in 11 PIUs where there are EM students.
	Establish a fund for female participants and participants from remote areas for in-service training to defray travel costs, childcare and other expenses.	PMU and MOH/DST	Establish a fund for female participants and participants from remote areas for in-service training to defray travel costs, and other expenses following the Government cost norms.		
	Disaggregate all data on participation in training activities exchanges and study tours by sex and ethnicity and include in PMU progress reports.	PMU and training institutions	All data on participation in training activities, exchanges and study tours in PMU activity reports is disaggregated by sex and ethnicity.	Project monitoring forms were finalised in May 2014 with support from the International Consultant to the project M&E consultant team: Project monitoring forms provide gender and ethnicity disaggregated data on all project-supported training and related activities.	Can be checked with study tour data.
	Ensure 10% EM representation in teacher	PMU and participating	Priority is given to EM teachers and women.	Can be verified with data in the gender and ethnicity	

	exchanges and study tours or at least proportionate to their representation in the region served by the relevant training institutions.	institutions		disaggregated monitoring forms developed in May 2014.	
	Provide equitable opportunities for men and women to participate in international exchanges, and support English language training to facilitate these exchanges	PMU, MOH/DST and participating institutions	Project give equitable opportunities for men and women to participate in international exchanges, and support English language training to facilitate these exchanges.	Can be verified with data in the gender and ethnicity disaggregated project monitoring forms developed in May 2014.	
	Improve financial and other support to EM candidates for pre-service and in-service training, including scholarships for EM students to participate in health worker training.	MOH/DST	Project provides support to EM candidates for pre-service and in-service training, including scholarships for EM students to participate in health worker training.	Government cost norms very low with an additional 100,000VND/month.	
	Ensure that at least 30% of scholarships and other financial support under the program are given to EM candidates.	PMU and training institutions	Project will give 30% of scholarships and other financial support under the program to EM candidates.	Can be verified with data in the gender and ethnicity disaggregated project monitoring forms developed in May 2014.	
	Provide support for preparatory (bridging) courses for EM students in the Provincial Ethnic Minority Schools.	MOH/DST	Provide support for preparatory (bridging) courses for EM students in the Provincial Ethnic Minority Schools in Thai Binh Medical University		There is a national programme of Viet Nam Government to do this, which has been implemented for years.
	Implement scholarships for EM candidates for secondary or college level health worker training at provincial Secondary Medical Schools or College.	MOH/DST	Scholarships are given under the project scope	Government cost norms very low with an additional 100,000VND/month.	
	Ensure accessibility for	MOH/DST	Ongoing activity	Not clear if in-service training	

	women and EMs to in-service training networks for primary health care to be established by the project.			networks have been established by the project.	
	Training needs assessment of rural health workers include separate sections on EM and gender considerations.	MOH/DST	Assessment under implementation	A national consultant is undertaking an assessment of rural health workers training needs.	
	Develop an improved contract for students from rural and remote areas receiving subsidized training.	MOH/DST		MOH is working on policy reform of the special entry programs for EM students and on policy to send newly graduated medical doctors to working in remote areas, and to improve the attendance of students on courses that normally attract few students.	
	Develop plan to strengthen current weaknesses in the implementation of the "formation by address" and "special entry programs" for EMs, particularly to improve financial viability of the programs to students from remote areas and poor families.	MOH/DST	Will be considered	Project has provided 76 scholarships for post-graduate students to attend courses with regularly few students for specialist studies.	
3. Improved Management Systems in Health Service Delivery					
Policy Measures					
	At least 3 of the 20 care pathways piloted are for medical conditions that primarily affect women or are primary care focused (including for normal deliveries and Caesarian sections).	MOH/CCA and CMRU	Developed 5/26 care pathway piloted are for medical conditions that primarily affect women or are primary care focused (Benign neoplasm of breast D24; benign neopl of corpus uterine, Benign neoplasm of cervix D25; unspecified ovarian cysts N83; Single	26 care pathways of them 5 in female health and 1 in child health are being piloted in 34 hospitals.	

			delivery by caesarean section O82; Ectopic pregnancy)		
Project Activities					
	Appoint gender and EM focal points in the CMRU to provide support to CMRU staff on gender and EM concerns related to care pathways.	PMU and CMRU	2 persons (1 Hospital consultant and 1 staff) are appointed	The appointed staff has no role to ensure gender and EM issues inclusions. There is no awareness of any specific gender or EM concerns	
	Include all relevant levels of health staff (e.g., nurses and midwives) in development and costing of care pathways.	CMRU and hospitals	1,288 health staff have been involved in the development and costing of care pathways, 62% female (798/1288)		
	Monitor and report on impacts of the care-pathway process and payments on patients related to gender, ethnicity or income level.	CMRU and hospitals	Will be done at later stage.	Impact monitoring not yet developed.	
	Ensure that all training related to the pilot promotes awareness of and sensitivity to gender and ethnic differences among patients	CMRU	All training related to the pilot promotes awareness of and sensitivity to gender and ethnic differences among patients	Three training courses arranged so far. No gender or EM awareness recognized by Component Coordinator and staff.	
	Ensure representation of women and EMs in training related is proportionate to their representation in the underlying trainee pool.	CMRU	2 courses for care pathway development: 42% of participants female (110/261)	Added to this data, a training course was arranged in late 2013 with 129 participants, but no data on participants' gender. Q3 and Q4 2014 more training of healthcare staff planned	
	Prioritize costing of normal deliveries, Caesarean sections and major obstetric complications.	CMRU	Prioritize costing of normal deliveries, Caesarean sections and major obstetric complications		
	Study the financial viability	CMRU	5 Hospitals (Son La,	The system is neither	

	of a case-based payment system in poor or remote areas, and related options to ensure that patients in these areas have access to quality health care.		Quang Tri, Quang Nam, Hue, Soc Trang) presenting poor and remote areas.	financially viable nor effective in providing services on equal basis to the poor and to those who are able to pay for the services. However, according to the Component Coordinator it is not among the tasks of the Component staff to assess the financial viability.	
	Ensure that equity considerations in the pilot are incorporated in any up scaling of the pilot and related system-wide changes (included documentation and training materials for future use)	CMRU	The training documents have developed are fitting that can apply for all the level and not differentiate on the gender and EM		
	Ensure that all training related to up scaling of the pilot promotes awareness of and sensitivity to gender and ethnic differences among patients	CMRU	Gender awareness in the training programs	So far no awareness among Component staff or in training programs on gender and ethnic considerations.	
	Ensure that the representation of women and EMs in this training is at least proportionate to their representation in the underlying trainee pool	CMRU	Priority is given to women and EM in training to achieve the target.	To be verified through monitoring data.	

Source: HHRSDP, Planning Unit and National Gender and Ethnic Minority Specialist