

2.5 Evaluation Process and Reforms

2.5.3 Reforms in examination procedures and processes including automation of the examination system

Reforms in examination procedures

SMVMCH takes timely effective measures in the implementation of reforms in the examination procedures. Reforms in exam conduction procedures facilitate to improve the efficiency, fairness and effectiveness of the assessment process. The various reforms are:

- *Reforms in the exam committee*

The exam committee was reframed and Internal Assessment Examination Committee (IAEC) was formed. The IAEC is involved in ensuring proper performance of the various duties in conducting theory examination, namely, paper setting, exam time table preparation, evaluation and declaration of results. The invigilation team and flying squad were sensitized with their roles and responsibilities, which further facilitated smooth conduction of the internal assessment.

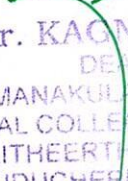
- *Reforms in the evaluation process*

The evaluation process was reformed with central evaluation in college and hospital block. The custodian will prepare the list of the evaluators and communicate with the concerned departments. Custodian will be guided by the IAEC for arranging the answer sheets for evaluation. Evaluation should be complete within 7 days after exam completion.

- *Blueprint for the question papers*

Blueprint refers to the detailed plan for designing and conducting assessments. It ensures alignment between assessment and specific learning objectives. It provides a road map for the question paper setter and reduces the risk of repetition, including irrelevant or extraneous topics in assessment. Blueprint workshops were organized by Medical Education Unit to sensitize and prepare faculty for preparing blueprint for question paper setting for Internal assessments. A common blueprint template was designed and shared with all departments. Blueprint along with the question paper needs to be submitted to the Dean Academic office one week prior to the date of exam conduction.

- *Replacing the answer sheets with note books*


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Answer sheets were replaced with note books. The concept of introducing note books for the internal assessment had greater advantages compared to the answer sheets like enhanced organization, reduce paper wastage, improved review and revision, enhanced exam security and helps in long-term documentation. It enables the students to reflect on their thought processes and faculty to provide personalized feedback and track the progress of the students.

- ***Reforms in the exam grievance redressal procedures***

Exam related grievances will be addressed by the exam grievance redressal committee. The students are instructed to fill the exam grievance redressal form within 7 days of exam result declaration. The exam grievance redressal forms are available in the concerned departments. The students can fill the form and the concerned faculty has to re-evaluate the answer sheet which will be countersigned by the respective department HOD. Re-evaluated marks should be reported to the custodian along with the form for mark rectification.

- ***Reforms in the exam pattern***

Multiple Choice Questions (MCQs) were introduced in to the assessment along with the long and short answer type questions. The MCQs were assessed using the google form or Learning Management System (LMS).

Reforms in processes integrating IT

SMVMCH plan for timely reforms in facilitating processes integrating IT for evaluation purpose. The various processes integrating IT are:

- ***Learning Management System (LMS)***

The institutional SMVMCH LMS platform is a Moodle Cloud based central learning platform offered to the students for learning and assessment. Resource materials in the form of PDFs, PPTs, videos, voice over PPTs, MCQs, previous year question papers and e-books are shared in the LMS. Formative and internal assessment MCQs are conducted through LMS. Grading and MCQ analysis is also done in LMS.

- ***Student Management Suite, SMS Solutions (SMS)***

All assessment scores and students' attendance are uploaded in the institutional SMS software. Parents are periodically intimated regarding the internal assessment marks and the attendance percentage through the messages automatically sent by the software.

- ***Biometric Authentication***

Biometric authentication using finger print is employed to take attendance for the students. It ensures security and accurate identification of the students.

- ***Mobile based assessments: Quizzes, pear deck- formative***

Formative assessments are also conducted in other e-platforms like quizzes, pear deck facilitating mobile based assessments. Students can login using the code shared by the faculty and join the live MCQ online assessment.

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- ***Pondicherry University Exam portal***

The application forms are generated in the University website, after making entry of student details. Once the application forms are filled online, the hall tickets are generated a week prior to the University examinations and they are distributed to the students in the institution.

The Internal assessment marks are entered in the University portal <http://exam.pondiuni.edu.in/oasis/mainpage.htm>

Continuous Internal Assessment (CIA) System

SMVMCH promotes CIA system fosters student-centric, personalized and comprehensive approach to evaluation, which nurtures continuous learning and professional development. It complements the summative assessments and helps in overall improvement of the student learning experience. The various steps and measures taken to promote CIA culture in SMVMCH are:

- ***Conducting regular Formative Assessments***

Regular formative assessments are done in the form of think, pair, share activity, MCQs, quizzes, classroom discussions, peer feedback, projects, group activities and many other. Formative assessment focusses on feedback for the ongoing process that facilitate better learning. This also facilitates the faculty to acknowledge the gaps in the knowledge and areas of difficulty and diagnose misconceptions.

- ***Conducting regular Internal Assessments***

Feedback has been made an integral component of continuous internal assessment to facilitate the learning process. Apart from the feedback written in the test note books, sessions are organized during the distribution of the test note books, where the students are given an effective sandwich feedback to enhance their performance. The mentorship program and the student support system play a major role in monitoring the progress of the students, in all the domains.

- ***Opportunities for improvement through remedial exams***

Remedial exams for the internal assessments are pre-planned and schedule is prepared. The remedial exams provide opportunity for underperforming students to improve their marks in the assessments. It is a type of formative assessment where students are given constructive feedback on the areas of weakness and areas of improvement. Students put extra effort to improve their level of understanding for the remedial exams.

- ***Clinical skill assessment and certification***

As per the CBME module, certification of clinical skills is mandatory. The various practical and clinical skills are certified and documented in the log books. Immediate feedbacks are given during certification that validates a healthcare professional has demonstrated the required level of competence to perform specific clinical tasks safely and effectively.

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- ***Holistic Approach to CIA system***

To promote holistic approach to CIA system, apart from evaluating and giving feedback on the theory and practical assessment, students communication skills, personality assessment, individual learning style assessment (VARK & ASSIST), individual study skills assessment (Denis Congo Study skill inventory) is also done and documented in the foundation course program. The mentors are made aware of their mentee details and based on that feedback is given.

Competency Based Assessment

National Medical Commission (NMC) in India has introduced Competency Based Medical Education (CBME) in 2019 onwards. Competency based assessment is an approach to evaluate the knowledge, skills and attitudes of medical students and professionals. It focuses on measuring specific competencies required to effective healthcare. The various reforms introduced in SMVMCH for the implementation of Competency Bases Assessment are:

- ***Faculty Development Programs (FDPs) to Orient them to CBME***

Various FDPs like Revised Basic Course Workshop (RBCW), Mapping workshop, Blueprinting workshop, Assessment in Medical Education, Assessment of attitude, e-content development, MCQ designing, skill assessment and others.

- ***Orientation and sensitization of students to CBME***

All students are oriented to CBME during the foundation course. All competencies are labelled with a department specific competency number by NMC. The monthly and yearly schedules are prepared with the competency number and displayed in the department notice boards.

- ***Blueprint and Answer key for the question papers***

All faculty are trained to prepare question paper based on the blueprinting. Competencies are incorporated and stated in the blueprint preparation. The advantage of preparing blueprint-based question paper is that, it ensures all the specific competencies related to the particular topic are covered and assessed. The answer keys are prepared and threshold for each question is fixed based on the order of thinking addressed in the question (lower order or higher order thinking question).

- ***Measuring the competency attainment using the copyrighted Mapping Module***

The faculty and clerks of all departments are trained to measure the competency attainment of the addressed topic for assessments. Report regarding the unattained, attained and untested competencies is prepared and based on that future action plans are worked on.

- ***Mapping Subcommittee formed by Medical Education Unit (MEU)***

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Mapping subcommittee is formed by the MEU and is required to update the mapping status of all departments periodically. Each department has a mapping in charge, who takes care that the mapping process is functional and reports are submitted to Dean Academic office.

Workplace Based Assessment

Workplace based assessment complements the traditional classroom learning and ensures that medical professionals are competent in delivering safe and effective patient care in real-world settings. The various workplace-based assessment done in SMVMCH are:

- ***Direct observation***

It involves direct observation of the professional's performance by an assessor/mentor/guide. Postgraduate (PG) student is observed by the guide during their regular work activities, such as patient interactions, clinical procedures, teaching sessions and other tasks.

- ***Multiple Assessment Tools***

These tools include structured mini-clinical evaluations (mini-CEX), case-based discussions, Direct Observation of Procedural Skills (DOPS), peer assessments, patient feedback and self-assessments.

Mini-CEX is a short-structured assessment where the evaluator observes a student encounter with a patient. It assesses the not only the clinical skills but also communication, professionalism and other competencies. Immediate feedback is provided to the students and the individual's performance is rated. DOPS assessment is structured, with clear criteria and guidelines to assess the procedural skills. Evaluator uses a standardized rating scale to evaluate the students' performance

Peer Assisted Skill Assessment enables the students to evaluate their peer skill performance and helps to identify the routinely done mistakes and provide opportunities for correction.

- ***Formative and Summative Assessment***

Formative assessment provide feedback and identify areas for improvement to improve skills continuously. Summative assessments make judgements about a professional's overall competence and readiness for progression. SMVMCH conducts regular and robust formative and summative assessments as per the NMC guidelines.

- ***Reflective practice***

SMVMCH has incorporated reflective writing process in the curriculum. Faculty and students are trained for reflective writing. Reflective writing is motivated among students during the field trips, AETCOM sessions, Early Clinical Exposure sessions and family adoption programs.

- ***Self-assessment and Critical Appraisal***

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UG students evaluate themselves during the mentor mentee meetings and seek feedback from their respective mentors. PG students are required to do self-assessment and critical appraisal that gives an opportunity to reflect on themselves. Self-assessment helps them to identify their strengths and weakness, their career goals, seek feedback from their mentors and to recognize their accomplishments.

- ***Logbooks***

All UG and PG students are required to document their academic activities in the log books. These log books ensures that students keep a track of the attained competencies and skills in each department. The attained skill competencies are certified by the respective department faculty and HODs. The log books also encourage the students for reflecting on the learned experiences, lessons learned and decisions taken.

- ***360 Degree Feedback***

It is also known as multi-rater feedback, which involves gathering feedback from multiple sources to provide a comprehensive view of an individual's skills, behaviours and performance. The sources include self-assessment, peers, faculties, nurses, department clerks and stakeholders. The feedback is usually collected using questionnaires or surveys, where students are rated to provide their perceptions about the individual's strengths, weakness and areas for improvement. The process is kept anonymous to encourage honest feedback. This type of feedback provides a holistic assessment for the students, which may be missed by the traditional way of assessment. SMVMCH is in the initial phase of developing this assessment plan and future actions involves incorporating the 360-degree feedback plans into the student support system.

Self-Assessment

SMVMCH incorporates various processes where students are given opportunities to reflect on their own knowledge, skills, abilities and learning experience in specific areas. It helps them to critically evaluate themselves to gain insight into strengths, weakness, and areas of improvement.

Self-assessment is done during:

- ***Mentor Mentee Meetings***

During the feedback sessions the students are asked to reflect on their own strengths and weaknesses. They are made to write their action plans and then follow up is done by the respective mentors.

- ***Reflective writing***

Self-Assessment is routinely involved in the academic activities by incorporating student's reflection on Early Clinical Exposure / AETCOM/field trips.

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- ***Self-appraisal reports by PGs***

Postgraduates are encouraged to periodically submit their self-appraisal reports. They are required to do self-assessment and critical appraisal that gives an opportunity to reflect on themselves. Self-assessment helps them to identify their strengths and weakness, their career goals, seek feedback from their mentors and to recognize their accomplishments.

- ***Logbooks***

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Objective Structured Practical Examination (OSPE) and Objective Structured Clinical Examination (OSCE)

- ***Faculty training for OSCE and OSPE***

SMVMCH organizes various facilities to promote OSPE and OSCE stations. OSPE and OSCE are assessment methods used in medical education to evaluate knowledge, clinical skills and competence of students. Faculty are trained through faculty development programs like Revised Basic Course workshops, Simulation based training, OSCE workshops to train faculty in conducting OSPE and OSCE.

- ***OSPE***

OSPE assesses practical or procedural skills in controlled and standardized manner. It tests specific tasks or procedures, such as taking blood pressure, suturing, conducting physical examinations or using medical equipment. The exam can be conducted on series of arranged stations, each representing a specific skill or task. Candidates rotate through these stations and are required to perform designated task or procedure within a given time. It ensures fairness and consistency in the assessment process. It reduces the examiner bias and evaluation is based on predetermined criteria and checklist to evaluate student's performance.

- ***OSCE***

OSCE evaluates clinical competence and application of knowledge in real or simulated clinical scenarios. The OSCE is conducted in a clinical setting and students move through series of stations that simulate patient encounters or clinical tasks. Students encounter standardized subjects/patients or demonstrate clinical skills on task simulators. Feedback is provided to students to identify their strengths and areas of improvement.

- ***Objective Structured Video Examination (OSVE)***

This teaching method was adopted during the lockdown period of first COVID wave. The students were about to commence their classes on "how to elicit history" when lockdown happened. In order to mimick the doctor patient interaction, this session was planned and

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executed utilising the faculty and post graduate students of General Medicine. In the planned competencies, a short video was taken, where a postgraduate student interacted with a real patient, focussing on 'eliciting history' alone. Each video was sent to a group of students well in advance through Google class room and the task for the student was to view individually and also interact with the other team members and present on the day of their class, online. The facilitator then guided the students on the importance of those questions and clarified the doubts online. The interactions in some videos were made with some missing informations purposefully, to find out if the students were attentive enough to note it.

- **Peer Assessment of Skills (PASS)**

This method of OSPE and OSCE was implemented in the Department of Physiology for hematology and clinical skill assessment. In this method, the various practical were first demonstrated by the faculty and the process of grading was explained to the students. Then the students graded their peers in small groups based on the predefined checklist.

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