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Education and Training in Laboratory Medicine

Cod: M303

DIAGNOSTIC CONSULTATION BY CLINICAL CHEMISTS LEADS TO APPROPRIATE AND ECONOMIC LABORATORY DIAGNOSTICS: FACT OR FICTION?

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Introduction: The use of guidelines by general practitioners (GP) results in more specific test-ordering. To stimulate more appropriate and cost-effective test ordering, our clinical chemists started diagnostic consultation for GPs on anemia. During the diagnostic consultation the tests mentioned in the guideline of the Dutch College of General Practitioners (DCGP) are discussed. The consultation included personal feedback on laboratory test ordering as has been done by the GPs in the previous period and a discussion on these data. During the consultation the application of the DCGP guideline for anemia was linked directly to the nationwide used problem-guided request form for laboratory diagnostics. Time was spent on the use of ferritin to assess iron deficiency, the lack of specificity of LDH, the use of MCV, and the usefulness of a complete blood count for diagnosing anemia. During a follow-up consultation the impact of the intervention was discussed by comparing the number of requests for the different assays before and after the diagnostic consultation. The aim of this study was to assess the impact of this diagnostic consultation on the laboratory test-ordering related to anemia.
Method: The results of the diagnostic consultation was assessed by comparing test ordering before and after the diagnostic consultation by GPs from 20 groups of GPs (in total 146 GPs) who participated in the diagnostic consultation with 12 groups of GPs (in total 93 GPs) who did not participate. The number of requested tests for the different assays was collected during a 6-month period before and after the diagnostic consultation. Statistical analysis was performed by means of the non-parametric Mann-Whitney U test.
Results: A statistical significant decrease was found in the number of requests for iron, transferrin, vitamin B12, folic acid and thrombocytes. In addition, regional differences were observed, depending on the test ordering in the past.
Conclusion: Diagnostic consultation by clinical chemists, consisting of personal feedback on test ordering, information on the national guidelines and the use of the nationwide request form for laboratory diagnostics for GPs, leads to a more appropriate and economic use of laboratory diagnostics by GPs.

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Cod: M304

LAB-SURFING: IMPROVING COMMUNICATION AND NETWORKING AMONG YOUNG SCIENTISTS ALL OVER THE WORLD

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In a constant evolving profession, Young Scientists (YS) are always seeking for education opportunities and Lab technology advances. They can find answers to their queries in international exchange programmes & communication. The IFCC Professional Scientific Exchange Programme (PSEP) is the best example of success of that kind of project. In the digital era, distance barriers can be easily overthrow. Information & Communication Technologies (ICT) are great tools that young scientists can easily learn and control.

A global web survey was conducted in 2015 by two members of YS national associations: FNSIP-BM from France and CoReBio from Argentina. Its main goal was to understand the diversity of laboratory medicine young workforce, and to identify their expectations regarding improvement of communication and connections among Young Scientists all over the world. With the help of national associations and of the IFCC TF-YS, the survey was sent to different YS from all over the world.

The verdict from 121 responses of YS representing 19 countries was: 94% were interested in participating in an international network of residents in LM and 74% were interested in having an active role in Exchange programmes.

Making use of ICTs, we developed a modern, efficient and friendly website named Lab-Surfing.com. Financial support from the IFCC Foundation for Emerging Nations (FEN) was essential to make this project possible.
Lab-Surfing.com is a social network specially designed & created for young laboratory medicine professionals. With Lab-Surfing you can find colleagues sorting by city, country or laboratory interests, and connect/contact freely with the whole world.
The principal objectives of this social media are to:
• Improve a fast and easy communication among scientists from all around the globe
• Improve networking and cooperation among world colleagues
• Make exchange programs easier
Secondary objectives:
• Increase IFCC visibility in developing countries
• Improve Clinical Chemistry and Laboratory Medicine in hospitals with YS
• Denote the important role of YS in Laboratory Medicine

The website is now available since September 1st 2016 in 3 languages (English, Spanish and French) and you are all welcome to join and build the Lab-Surfing community with us on www.lab-surfing.com

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Education and Training in Laboratory Medicine

Cod: M305

POINT OF CARE TESTING AUDIT INTO THE AWARENESS AND PRACTICES OF MEDICAL STAFF AT TYGERBERG HOSPITAL: FOCUSING ON GLUCOSE, BLOOD GAS AND URINE REAGENT-STRIP MONITORING.

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BACKGROUND
Point of Care Testing (POCT) has become an integral part of healthcare as it aims to provide rapid information and improving patient outcomes. Although POCT has many advantages, it also has some limitations which affect its use and implementation. It is important for ward personnel using POCT devices to be aware of their limitations. As new devices become available, hospital staff require regular training to refresh their knowledge and skill in performing POCT.
METHODS
The audit was conducted with the use of a questionnaire containing 30 questions. A total of 160 questionnaires were hand delivered to 55 sites comprising wards, emergency units and out-patient clinics between June and July 2016. Out of the 160, 68 questionnaires were returned completed (42 % response rate). Data analysis was done on excel with basic descriptive statistics.
RESULTS
Most respondents were nursing staff (88%) and the rest were medical doctors (12%). Of the nurses included, the majority did not indicate their qualifications; of those who did 25% were registered nurses, 5% were registered assistant nurses.
Most respondents (97%) performed glucose monitoring (n=66); 24% performed blood gas testing, while 25% performed urine dipstix testing. Most respondents indicated that POCT is necessary in their respective wards/clinics (84%).
Some (51%) reported to have had some formal training in one or more of the tests and 37% reported to have never had any formal training in their respective tests. Of those who had some formal training, time since training ranged from 6 months (17%) to 2 years (40%) with the majority never having a formal assessment to assess competency in performing their respective tests (67%), 12% had a demonstration done and only 12% reported to have had a formal assessment of competency.
Many respondents (53%) did not know if any validation of new instruments was performed prior to use in the wards/clinics, with only 29% indicating some validation was done by the clinical engineering department. The usefulness of POCT was rated high by most respondents (79%), on a scale of 1 to 5.
CONCLUSIONS
Hospital personnel need to have a basic knowledge and skills to perform routine POCT. Appropriate implementation of a POCT service requires focus on all aspects including staff training and quality assurance. Audits like these give an indication of the current state, and where intervention is mostly needed to improve patient care in the long-run.

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Education and Training in Laboratory Medicine

Cod: M306

APPLICATION OF SMARTPHONE PHOTOMICROGRAPHY AND MODERN INFORMATION TECHNOLOGIES IN LEARNING AND PRACTICE OF PATHOLOGY USING COST-FREE DO-IT YOURSELF-DEVICE.

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BACKGROUND:
Teaching microscopic skills to students is one of the biggest challenges especially in institutes where resources are limited. Most medical colleges in developing countries use traditional way of teaching pathology using light microscopes. Lot of time is wasted in conventional teaching and finer points of microscopic morphology are not easily understood by students.
METHOD:
Here are discussing to exploit potential of smartphones and modern technologies in learning and practice of pathology. We have made a simple innovative hands free display box attachable to light microscope for: viewing, explaining, photographing, storage and transfer of micro-photographic images and videos using smartphone with modern technologies. This box can be assembled using easily available materials- a pet bottle which fits eyepiece and mobile case.
RESULTS:
This simple, innovative, cost effective assembly is useful to teach microscopic morphology to undergraduate and postgraduate students of pathology. It is well appreciated by teachers due to its effectiveness to demonstrate fine aspects of microscopy without wasting time. Students are happy because they can understand subject nicely. Images and video sessions can be stored in smartphones and can be revised later as per convenience. Practicing pathologists have used this tool to discuss critical cases.
CONCLUSION
This innovative idea is quite useful for students, teachers and practicing pathologists. It can revolutionize teaching and greatly improve learning microscopic skills in pathology students. By implementing this idea, we will improve teaching microscopic morphology. This idea can be extended to other branches of medicine and other science streams where microscopy is important.

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Education and Training in Laboratory Medicine

Cod: M307

THE CONTINUING EDUCATION AT THE DEPARTMENT OF HEALTH TECHNICAL PROFESSIONS: AN INTEGRATED PROJECT FOR E-LEARNING, HOME TRAINING, CLINICAL PRACTICE AND HEALTH NEWS

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Background
Continuing Medical Education (CME) is based on the acquisition of educational credits. In Italy, those CME credits measure the efforts and the time every caregiver spents to update and to improve his/her professional capabilities and specific knowledge. In this manner, CME credits correspond to eductional activities and the dedicated time aimed to ensure efficiency, efficacy, appropriateness and safety. Caregivers should get 150 CME credits over the period 2014-2016. The creation of an integrated multiprofessional model could improve personal competencies and individual skills (i.e., clinical, technical and organizational ones) to support the daily activities within a tertiary hospital (Azienda Ospedaliero Universitaria Pisana, AOUP).
Methods
To adopt training corse, e-learning, clinical-diagnostic processes, professional meetings for hospital units, training projects concerning general (organizational) criticisms or professional/institutional hurdles.
To use several kind of learning/traininig courses to improve abilities and knowledge, and, as a consequence, to acquire the required CME credits.
Results
Caregivers and technicians from Radiology and Rehabilitation Units (more than 400 individuals) have planned permanent meetings for professional update concerning organizational issues within the units. In particular, more than 20 training courses addressed to 170 caregivers and technicians have been integrayed by multiprofessional meetings (i.e., biomechanical overload), analysis of relationships between clinical and laboratori activities (i.e., imaging), multicenter territorial courses (i.e., organization of the regional blood collection/transfusion facility), projects of ethics and professional ethics, e-learning courses, institutional mandatory education (health/safety, anti-corruption, fire-prevention courses), present emergencies (FoodBorne infections, Zika virus).
Conclusions
The integration of different learning modalities, with particular reference to the e-learning, has helped caregivers to acquire the majority of 2016 CME credits. That fact allowed the AOUP to comply with the mandatory learning objectives requested by the Ministry of Health, hence guiding the caregivers along their learning courses during their daily activities.

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Education and Training in Laboratory Medicine

Cod: M308

AN INTERPRETIVE SUPPORT FROM SPECIALISTS IN LABORATORY MEDICINE- PATIENTS VIEWS FROM EIGHT EUROPEAN COUNTRIES

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BACKGROUND:
In order to assess the patients' views on their active involvement in medical decision making by getting the access to their laboratory results with the accompanying commentary and support from the SpLM (Specialist in Laboratory Medicine), EFLM's Patient Focused Laboratory Medicine Working Group have conducted a survey in eight European countries.
METHODS:
A questionnaire was distributed to participating members of the WG and translated into the local language. Each survey was conducted independently and at different times over a period of one year, in part due to local ethical reviews taking time and the logistics of particular sites. Question on fee cost was set at €15 and adjusted locally to match the local cost of living. One hundred consecutive out-patients who agreed to participate at medical clinics were surveyed having received a questionnaire on recruitment and who returned the form at the end of their visit. The participating institutions were located in: Poland, Serbia, The Netherlands, Denmark, Estonia, Turkey, Norway and Czech Republic.
RESULTS:
A total of 1084 patients were surveyed, with 100 patients each in Poland, Serbia, Netherlands, Turkey and Czech Republic, 101 in Estonia, 116 in Denmark, and 367 in Norway. Of the total of 1084 participating patients, 64.5% wished to receive their own laboratory results, 35.5% did not and were not questioned further.
Of 699 participants wanting to receive their own laboratory results, 71.9% wanted additional information, 27.2% felt that they understood the results, and 1% did not respond. A personalized report was favoured in all countries. The suggestion that comment and interpretation could be added and that there could be a fee did not meet as much favor, with only 25.0% wanting a personalized report but were not interested in covering the costs, and only 6.6% responding being willing to pay.
CONCLUSION:
The presented results show that there was an overall significant majority of examined patients interested in receiving their results. More than two thirds of patients wanted additional information for interpretation, favoring standardized description within the report over the reference to a website. The majority of participants were interested in receiving personalized interpretative comment of their results by a SpLM.