

ICTS transforming informational and decision-making processes of cancer multidisciplinary teams (MDTs): lessons learnt from EU experts



TYPE
STATUS

Dissemination is ongoing

LAST
UPDATE

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EUROPE • HEALTH SYSTEMS
Diagnostic and treatment

PROBLEM & OBJECTIVE

PROBLEM The use of information and communication technologies (ICTs) facilitates new modes of teams' interaction and streamlining information management processes. This transformation extends beyond typical functionalities like teleconsultations, encompassing the integration of other care components like patient-reported outcome measures (PROMs) into hospitals' ICT and health information systems (HIS). However, the qualitative leap in the use of ICTs entails critical challenges posed by their adoption

OBJECTIVE Explore the set of ICTs and ICT-driven care components used by multidisciplinary team meetings (MTMs) in order to identify the critical challenges posed by their adoption, including the perspective of the medical information and IT contextual factors.

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KEY COMPONENTS / STEPS

The lessons learnt from this research action, formulated at the European level, are based on the perspective of key informants and case study discussions. Key components are:

- Key informants were selected from 9 European scientific societies and health systems plus the OECl, encompassing 4 European countries. Professionals were experienced in adopting of ICT in the context of MTMs.
- A multidisciplinary European workshop, lasting approximately 5 hours, was organised on 5 July 2019 in the European CanCER Organisation (ECCO) headquarters in Brussels.
- The workshop was divided in two phases: (1) case study presented by professionals based on their medical discipline and local experience; and (2) focus group discussion, organized around the three stages of MTM development, namely, (a) preparation and organisation, (b) clinical decision-making process, and (c) recording of decisions and outcome evaluation, plus a transversal domain devoted to capture the medical information and IT contextual factors.
- The initial draft was circulated among participating professionals for final approval.

KEY CONTEXTUAL FACTORS

- The adoption of ehealth practice is generally modest and uneven between different European health systems, and unsuccessful experiences are not unheard of.
- ICTs' use was clearly accelerated by the COVID-19 pandemic.
- Although there are pronounced organisational and financial differences between MDTs from different European health systems, all MDTs are characterised by the central role of the MTM as the main decision-making body.
- MTMs represent a widely recognised standard of care, included in different accreditation and quality systems.
- Healthcare services are increasingly based on a network model and health professionals coordinate multiple services on behalf of patients, but many digital services are still being designed in line with a silo-based (hospital-dependent repositories) data processing model.

MAIN IMPACTS / ADDED VALUE

- ICTs are playing a key role in opening MTMs to other institutions and departments (by means of virtual MTMs and molecular tumour boards) as well as to patients through data registries that have an impact on these processes in real time (e.g., PROMs). ICTs also contribute to increasing the internal efficiency of teams, for example, through the PACS system and images display, the use of multidisciplinary electronic agendas to draw up patient lists or through specific software for case presentation. These technologies are also enabling the use of operating systems intended to improve MTM decisions (e.g., real-world data in clinical decision support systems, CDSS) and contribute to assessing team performance.
- There is a low concordance between MDTs' information needs and the adequacy of current IT context. Hospital HIS are still based on reports and clinical services, rather than organised along care processes. The combination of 'passive' HIS and EHRs – conceived as instruments to store and classify information, not to work with it – plus the massive generation of unstructured data in the form of free-text pdf files, is the clearest expression of this gap.
- The MTM coordinator, whose overarching role is to manage patient lists and promote clinical consensus, could also potentially assume functions related to synchronising the team and the different interfaces (molecular tumour boards, virtual MTM) along with the inputs generated or facilitated by ICTs (CDSS, PROMs). This figure could also proactively manage the patient agenda, for instance by validating the stratification of cases proposed by different professionals.

LESSONS LEARNED

- Although the degree of adoption of ICTs and care components is uneven among different European health systems, our results showed common trends in digital, dynamic interaction between team members and the larger health ecosystem (beyond the hospital setting), and the integration of patient inputs and support systems as well as from physician-generated information.
- The transition towards a new MTM model will lag unless HIS overcome current limitations for providing structured data, allowing MDTs to assess their performance and outcomes.
- The current proliferation of ICTs and care components in the MTM context requires rationalisation of their use based on medical criteria – not only technological feasibility. The use of artificial intelligence (or deep learning) in CDSS illustrates the ethical dilemmas and misgivings that can arise.
- While it is desirable for mature MDTs to integrate ICTs that increase their effectiveness and efficiency, the adoption of ICTs does not preclude professionals' and MDTs' need for support. A data manager or administrative or IT support should accompany the implementation and use of ICTs.

REFERENCES & DOCUMENTATION

- Published article submitted
- IPAAC Report

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