New Year wishes – the medical informatics view

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The past few months, which will go down in the history books as the "Corona Year", have demanded a lot of commitment, a lot of flexibility, a lot of stamina and sometimes also a lot of innovation from all of us. But they have also made us aware of what we have given too little weight to or neglected in the past: an ideal basis for listing wishes. Stephan Siegrist from the think tank W.I.R.E is a little more severe in his assessment of contemporary IT when he says: "Digitalisation has disappointed. This was foreseeable even before Corona, but the pandemic has revealed it even more clearly" [1]. Seen in this light, there is undoubtedly a need for action.

In order to cope with the exceptional pandemic situation, many healthcare workers have already performed extraordinarily well under difficult conditions, and they will continue to do so. Complicating the effort in caring for the numerous and seriously ill patients, organisational adjustments were necessary in many places. Medical informatics specialists and IT staff have done their utmost to redefine and map processes, to relieve clinicians of administrative work as much as possible, through automation and innovation, and – especially in the early days of the COVID-19 pandemic – to bring a certain stability to the uncertainty through information processing and transparency. On behalf of our Society, I would like to express our sincere thanks to all of them.

Even if we can be proud of particularly quick and perhaps particularly innovative or efficient solutions, there are still some things that need to be addressed and put on a wish list (with a positive connotation) or to-do list (with an honest connotation) for the year that has just begun.

No time to report

Top ranked on the wish list is an efficient, automated reporting system in real time. The much-vaunted digitalisation would unleash its potential especially in the reporting area and especially for time-critical diseases – as exemplified by COVID-19. Nowadays, primary systems can (and must be able to) provide automated reports in a standardised format at any time, with any degree of de-identification requested. All that is needed is the – sometimes pragmatic – decision on a dataset reduced to the minimum necessary attributes and a comparatively simple evaluation. From regional or cantonal collection points, these can be aggregated nationally and the uncertainty about the data situation would be history. This procedure actually applies to the reporting of laboratory results in exactly the same way as to all other data, often collected for statistical purposes, and should definitely replace the still common online forms. Hand-in-hand with a possible further processing (in the actual context e.g., SwissCovidApp, incidentally exemplary in design), one thus achieves an extremely efficient (because automated), extremely economical (because automated) and extremely effective (because automated: rapid information of persons tested positive and their contacts) solution; the classic W(irksam)Z(eckmässig)W(irtschaftlich) criteria of the Swiss healthcare system purely presented.

Flexible standardisation

Also on the wish list is the everyday use of standards. The building blocks are available both in the area of semantics and for purely technical exchange formats. This means that the standardised ground, which must be used flexibly, has been prepared. The task – in the pandemic context in particular – is to master the pragmatic implementation of these standards in everyday life. In the COVID-19 environment in particular, time is the decisive factor and rapid (but correct) reaction is crucial. Accordingly, it is important to combine expertise in standardisation with the necessary flexibility for rapid implementation; FHIR (Fast Healthcare Interoperability Resources) is a good example of this. I speak deliberately of flexibility, because the comprehensive and consistent implementation of standards per se often takes years, and too often the perfect (Swissness) solution is meticulously sought, but practical use fails to materialise; LOINC (Logical Observation Identifiers Names and Codes), Snomed-CT, and also HL7V3 are examples that are very welcome in principle, but are waiting for a high level of penetration in the everyday life of clinics and medical practices. LOINC in particular would be extremely valuable as a (selective) basis for a reporting system that is important in a pandemic and, used in this form, would also guarantee rapid and, above all, standardised transmission of findings.

Proactive response

Especially in times of crisis, people are inclined to fall back on the old and familiar. Quite a few institutions quickly formed crisis teams at the beginning of the pandemic. Medical IT specialists are likely to have been represented in very few of these crisis teams, even though the restruc-

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turing of processes, the support of specialists in unfamiliar locations, automation to relieve overcrowded emergency departments, the permanent communication of information in the face of a constantly changing information situation, the reporting system and the ever-present threat of a loss of know-how carriers all call for digital support. Accordingly, the wish list for the New Year would also include seeing assistance through digitisation for what it is: useful in proactive planning, valuable through a (perhaps disruptive?) extension of the traditional re-/action pattern and, unfortunately, often inefficient when used as pilotitis or to quickly digitise a process that was mentally designed from an analogue viewpoint. However, it is precisely the latter that is the case when corresponding decisions are made without seeking the expertise of people with digitisation experience in healthcare – often these will be medical informatics specialists.

Evidence-based innovation

Medical informatics has succeeded in building up a body of scientific literature, analogous to the great model of clinical research, which should be used. Even if many questions remain open and some findings are not easily transferable, there are still numerous publications and experiences that can be used in the sense of an evidence-based use of IT resources in healthcare. This know-how, which is also widely available in Switzerland, being increasingly requested and listened to is definitely worth an item on the wish list. Too often, an implementation is still programmed on the assumption that it will effectively generate a solution. The evidence base does not have to correspond to a perfectly conducted study: in the current situation, experience from automations and online registrations for COVID tests may well serve as a basis for setting up vaccination centres. Too often, however, this exchange of experience or the targeted inquiry of the corresponding experiences is unfortunately lacking. Medical informatics, as an ideal link between science and practical everyday life, is predestined here. But a portion of innovation demanded/supported by the state, as initiated by Germany with the health innovation hub, would certainly not hurt.

So, has digitisation disappointed? Or have decision-makers disappointed by not picking up the potential of digitisation? Or have the people disappointed who uncritically create, use and demand digitisation? Or have the specialists disappointed who promote digitisation? Or are we setting the wrong expectations for the (challenges of) digitisation? In the hope that we can fulfil some of the items on this (admittedly partly subjective) list in the coming months, I wish us all the most efficient and effective use of medical informatics resources in everyday clinical practice!

Reference

1   Siegrist S. Was uns 2021 beschäftigen sollte. NZZ am Sonntag. 2021 Jan 3. pp 16–7