C Rae (caroline.rae@chelwest.nhs.uk)

Healthcare related costs of missed opportunities for HIV diagnosis: a potential driver to increase Indicator Condition guided HIV testing

C Rae[1], K McFaul[1], K Stegmann[1], I Sperle[2], D Raben[2], J Lundgren[2], AK Sullivan[1] for OptTEST by HiE
1 Chelsea and Westminster Hospital NHS Foundation Trust, London; 2 Rigshospitalet, University of Copenhagen

BACKGROUND

National and European guidelines recommend HIV testing in individuals presenting with HIV indicator conditions (IC). However this is variably implemented across healthcare settings, resulting in missed opportunities. New drivers are required to encourage decision-makers to deliver recommended HIV testing strategies.

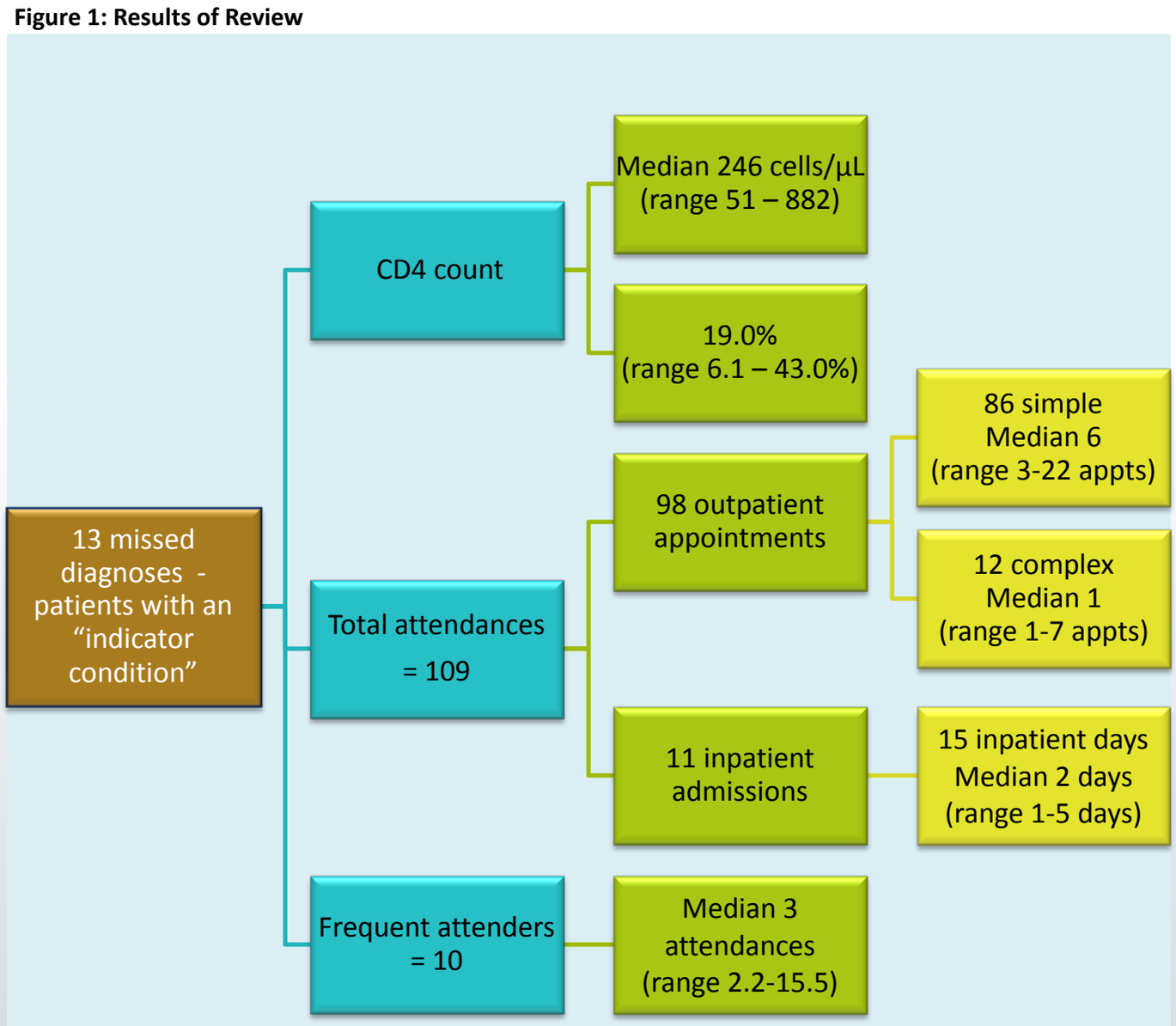
OBJECTIVE

Our aim was to develop a tool to assess missed opportunities in the specific context of organisational healthcare costs and loss of income.

METHODS

We identified missed HIV diagnoses as being those patients diagnosed between 2008-2014 with prior healthcare attendances at our centre within this period without receipt of an HIV test; further classified as IC related or not. Attendances were classified as simple or complex outpatient, day case and in-patient, with standardised costs assigned to each. The diagnostic attendance was not included. A self-calculating financial spreadsheet was developed. Frequent attenders were those with > 2 attendances/year; the UK HIV standard of care for stable patients with HIV infection.

Figure 1: Results of Review



RESULTS

Of 3,555 individuals who were diagnosed at our centre during this period, 43 had attended our hospital within the time they were likely to have been HIV positive (as individually assessed by investigators), and therefore classified as missed opportunities for earlier diagnosis. Of these 13 had presented with an IC. This group had a median CD4 count of 246 x 10*9 cells/uL, 19.0%, range (51-882 x 10*9 cells/uL, 6.1-43.0%). They had a total of 109 attendances before being diagnosed. There were 98 outpatient appointments; 86 simple[median 6, (range 3-22)], 12 complex [median 1, (range 1-7). There were 11 inpatient admissions, with a total of 15 inpatient days as a result of these admissions [median 2 days (range 1-5 days)]. 10 patients met the criteria for frequent attendance; median number of attendances 3 (range 2.2-15.5). The presenting indicator conditions were: persistent anaemia (2), anal warts, persistent diarrhoea (2), hepatitis C, leukocytopenia, lymphadenopathy (2), lymphopenia, shingles (3). The estimated cost to the organisation was £33,211 and loss of income was £81,950.

CONCLUSIONS

Patients with ICs are still missing the opportunity for more timely HIV diagnosis; increasing the likelihood of late presentation. In addition to the significant individual and societal costs, there is an additional cost to the organisation in terms of direct healthcare costs and loss of HIV tariff. In our analysis, these costs are likely to be significantly underestimated for a number of reasons: we could only review prior health care attendance at our centre as we didn't have access to information from other centres, particularly primary care and the cost of the diagnostic attendance was excluded; this is likely to be significant given the more advanced stage of disease. Furthermore our estimated costs are likely to be less when compared to many other centres in the UK as our local late presentation rate is relatively low (31.5%) and our centre has several routine HIV testing programmes (Emergency Department , Acute Medical Unit). This data can be used to obtain the financial support required for (relatively) low cost testing programmes. We plan to adapt this methodology and tools for other European countries as part of the OptTEST programme to support more widespread and effective IC driven HIV testing.

If you would like to be involved in this work and contribute to our European overview of the cost of missed diagnoses due to not delivering IC HIV testing, please email: hie.rigshospitalet@regionh.dk

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