Virtual versus in-person primary care visits

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Clinical question

What is the diagnostic accuracy of virtual compared with in-person visits for undifferentiated presentations?

Bottom line

Based on limited, lower-level evidence, diagnostic accuracy of virtual visits was between 71% and 91% using standardized patients or case review at 3 months. Diagnostic accuracy or agreement of virtual care seems similar to in-person visits. These studies do not address continuity of care or patient outcomes.

Evidence

- In a diagnostic cohort of 97 adults at their first visit to a general medicine clinic, in-person visits were followed by a videoconference with a different physician.[1]
  - -Diagnostic accuracy was not significantly different between in-person visits (83%) and videoconferences (80%). The most common presentations were respiratory (22%), digestive (19%), or circulatory (10%); 57% of presentations were acute and 43% were chronic.
  - -Limitations: all patients were assessed in person first and there was no long-term follow-up.
- In an audit of 599 virtual visits with 67 standardized patients with 1 of 6 presentations (ankle pain, viral or bacterial pharyngitis, recurrent urinary tract infection, rhinosinusitis, and low back pain),[2] diagnostic accuracy varied depending on presentation (71% for rhinosinusitis, 91% for urinary tract infection).
  - -There was no difference in diagnostic accuracy with video versus telephone.
  - -Limitations: limited, single concerns; not real patients.
- A primary care crossover trial randomized 175 adults to 1 videoconference and 1 in-person visit or 2 in-person visits. Both visits were with different physicians.[3] Diagnostic agreement was not significantly different between groups (84% vs 80%).
  - -Limitations: small numbers; trial included both undifferentiated concerns and chronic diseases.
- Systematic reviews of virtual care reported on access, satisfaction, cost, and clinical load; however, evidence on diagnostic accuracy is limited.[4,5]

Context

- Concerns about virtual visits include difficulty building rapport and risks to follow-up and continuity of care.[6,7]
  - -Continuity of care results in lower costs, hospitalizations, and mortality in the long term.[8,9]
- Diagnostic error is difficult to assess. Observational studies[10] with longer follow-up estimate a rate of outpatient diagnostic errors of about 5%.
- Most "missed" diagnoses were common conditions in primary care: pneumonia (6.7%), heart failure (5.7%), acute renal failure (5.3%), and cancer (5.3%).[11]

Implementation

New guidelines for practical implementation of virtual care are slowly appearing. The Canadian Medical Association has developed a playbook of practical ideas and suggestions for the incorporation of virtual visits into daily practice.[12] As continuity of care is linked to improved outcomes, virtual care that facilitates continuity should be prioritized over virtual visits with clinicians with whom patients do not have an established relationship.

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Competing interests
None declared

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Cet article se trouve aussi en français à la **page 905**.