**Supplemental Digital Content 1. Literature Review Definitions of Access and Access Management**

| **ID**  **Publication type** | **Perspective** | **Continuity** | **Access Definition** | **Access Management Definition** | **Other Relevant definitions** | **Access Outcome Measure** |
| --- | --- | --- | --- | --- | --- | --- |
| Armstrong, 2005;1 Schall, 2004;2 Lukas, 20083  Intervention evaluation | Population health (“so that all veterans can receive the care they need, when and where they want it) | Yes | Patient access to their primary care provider: Mean number of days between the date the appointment was first requested and the date the appointment was actually scheduled for all appointments desired by either the patient or clinician to occur “as soon as possible.”  Advanced clinic access: The organization provides enough openness or space (capacity) in the clinic for health services to meet the demand of its patient population at the time the demand occurs. Doing today’s work today. | NA | Clinic wait time: next available appointment | Average days until next available appointment  Time to next available appointment |
| Balasubramanian, 20144  Statistical model | Population health | Addressed but separate from access | Timely access: Ability of patients to secure an appointment as quickly as possible. | NA | NA | NA |
| Balasubramanian, 20105  Simulation | Population health | Addressed but separate from access | NA | NA | NA | Wait time |
| Belardi, 20046  Intervention evaluation | Supply-Demand | Yes | NA | NA | Advanced access: Offering patients requesting a same-day appointment a same-day appointment with his/her personal physician or another advance access team member if the personal physician was not available. | Time to 3rd available appointment |
| Bennett, 20097  Intervention evaluation | Supply-Demand | Yes | NA | NA | Advance access: Patients’ ability to schedule an appointment with the provider of their choice, for virtually any service, within a day or two (citing Murray & Berwick, 20038) | Time to 3rd next available appointment |
| Berry, 20149  Review/opinion | Population health |  | Patient-centered access: consistently providing convenient access to services that patients need and desire. The mission is to provide timely, high-quality care, irrespective of whether an in-person encounter is required. | Access management: Strategy to achieve the goal of patient-centered access – improved clinical quality and efficiency while reducing the time, effort, emotional burden, and expense that patients incur in obtaining care. | NA | NA |
| Boushon, 200610  Intervention evaluation | Supply-Demand | Yes | NA | NA | Access and office efficiency in primary care: System in which patients can be seen by their primary care provider when they choose, even on the same day. | Time to 3rd next available appointment |
| Cameron, 201011  Intervention evaluation | Supply-Demand | Yes | NA | NA | Lead time: third available appointment time for a particular physician.  Open access: same-day scheduling, advanced access; offers same-day appointments to patients calling to see their physicians, effectively reducing wait times and allowing primary care providers to deal with urgent and nonurgent demands on the same day patients call. | Time to 3rd next available appointment |
| Donahue, 201512  Analytic study | Supply-Demand | NA | NA | NA | NA | Time to 3rd next available appointment |
| Green, 200713  Statistical modeling | Population health | Yes | NA | NA | Advanced access: Just-in-time approach to patient scheduling. | NA |
| Harris, 201514  Intervention evaluation | Population health (“access to healthcare”) | NA | NA | NA | Advanced access: optimize patient access to primary healthcare. | Mean (SD, range) number of days to 3rd next available appointment |
| Kennedy, 200315  Intervention evaluation | Supply-Demand | NA | NA | NA | Open access: advanced access, doing today’s work today, or same-day scheduling. | Visit volume  Phone call volume and duration |
| Kilo, 200016  Review/opinion | Supply-Demand | Yes | Traditional definition of access: Length of time someone has to wait to get in to see his or her doctor.  Optimal access: Access to their own physician.  New definition of access: System by which a clinical office practice manages its capacity to provide care. Optimal access uses available capacity to serve patients at the time, in the location, and in the fashion most convenient to them, with the most appropriate provider for their needs. | NA | NA | Time to 3rd available appointment |
| Knight, 201317  Review | Supply-Demand | Varies | NA | NA | Appointment delay: Number of days from request until the third next available routine appointment (i.e. excluding reserved emergency appointments).  Open access appointment system: No appointments, patients turn up and wait to be seen.  Book on the day appointment system: Phone calls each morning until the day is booked.  Supersaturate appointment system: Appointments are booked according to the patient’s request.  Carve out appointment schedule: Practices deliberately carve out a number of their appointments each day for acute care.  Advance access appointment system: The aims are to start the day with enough appointments to meet demand on the day, no restrictions on making future appointments, prioritize continuity (improving outcomes and reducing demand). | NA |
| MacCarthy, 201218  Intervention evaluation | NA | NA | NA | NA | NA | Wait times for urgent care  Wait time to regular appointment  Wait time to 3rd next available appointment |
| Mehrotra, 200819  Intervention evaluation | Unclear | NA | NA | NA | Open access scheduling patients call the practice and are offered a prompt appointment, ideally on the same or next day, no matter what the reason for the visit. Patients are given a timeframe for follow-up and whenever the patient calls they can be seen the same day or soon thereafter. | Time to 3rd next available appointment |
| Meyers, 200320  Intervention evaluation | Supply-Demand | NA | NA | NA | Open access: providing a same-day patient appointment to military managed care priority beneficiaries regardless of the type of complaint. | Wait times for appointments  Time to next available appointment |
| Parente, 200521  Intervention evaluation | Population health (“receive primary care”) | NA | Access: Patients’ ability to seek and receive primary care in a timely manner (citing Murray, 199922). Access includes physical location of facility, hours of operation, telephone access, appointment waiting time, and time in waiting room (citing Goldstein, 200023) |  | Open access: requires patients to be seen when they want to be seen or when their referring provider wants them to be seen; and patients will see their provider of choice.  Access time: Time required for patients to wait before seeing their primary care provider. | Number of days from request to appointment |
| Pierdon, 200424  Organizational case study | Supply-Demand | NA | NA | NA | Demand (volume of services sought)  Backlog (services waiting to be provided)  Lead-time (wait time for appointment)  Cycle time (time from check-in to checkout  Supply (time available for providing care) | Percentage of open schedules  Lead time |
| Phan, 200925  Intervention evaluation | Supply-Demand | Yes | NA | NA | Open access: patients make same-day appointments regardless of the type of problem or visit required (providing care to patients at the time they need it rather than at a future scheduled appointment) | NA |
| Practice Management Network, 200926  Tookit | Population health | Yes | Good access: Patients being able to book an appointment quickly, within a reasonable timeframe, and pre-book option; patients being able to see a preferred clinician if they wish to wait longer for an appointment; patient access to reliable information about the practice, so that they can make their own decisions about the access they require; patients not only being able to book an appointment on the telephone but by other means; patients contributing to good access through patient participation groups and other forums; and patients being able to telephone the practice throughout the day. | NA | NA | NA |
| Radel, 200127  Intervention evaluation | Supply-Demand | NA | NA | NA | Open access practice: Offer patients an appointment on the day they call the office or another day of their choice (“treating today’s patients today”). | Appointment availability  Average time for established patients to schedule an office visit (days) |
| Rohrer, 200728  Intervention evaluation | Unclear | Yes | NA | NA | Same day scheduling: advanced access or open access; patients calling to see their physicians are offered an appointment on the same day. | Two or more primary evaluation and management visits per year |
| Sampson, 2008;29 Pickin, 2004;30 Windridge, 2004;31 Dixon, 2006;32 Goodall, 2006;33 Salisbury, 2007;34 Salisbury, 2007;35 Pope, 200836  Analytic study | Population health (“deprivation of practice population”) | No | NA | NA | Same day appointments: numbers of appointment reserved for patients booking on the day  Advanced access: understanding the demand profile over time; managing demand by offering alternative forms of provision; ensuring that the capacity meets demand; making contingency plans for times when there are fluctuations in demand; and involving patients in planning changes (citing Oldham, 200137).  Advance access = same-day scheduling = open access scheduling  Same day appointment model: today’s work, today. | Proportion of same-day appointments  Median number of working days to the 3rd available routine appointment with each general practitioner |
| Solberg, 200438  Intervention evaluation | Population health (“reduce waits and delays”) | Yes | NA | NA | Advanced access: Goal to provide patients with an appointment with their personal physicians on the patient’s preferred day regardless of the reason (citing Murray8,22,39)  Timely care: reduce waits and delays for patients and caregivers (citing IOM report).  Patient centered: respect patient preferences, values, and needs (citing IOM report40) | Time to 3rd-next available appointment |
| Steinbauer, 200641  Intervention evaluation | NA | NA | NA | NA | Open access scheduling: Same day or advanced access scheduling which theoretically eliminates the appointment backlog and makes appointments available the same day the patient calls, applying the principle ‘to do today’s work today.’ | Time to 3rd next available appointment |
| Tantau, 200942  Organizational case study | Population health (“waits and delays for healthcare” | Yes | NA | NA | Advanced access: Practices must be in a position to offer patients an appointment today, for any problem, with the provider of choice or another care team member in the absence of the chosen provider. | Time to appointment |
| Tseng, 201543  Intervention evaluation | Supply-Demand | Yes | NA | NA | Traditional access model: no reserved appointment slots in advance.  Carve-out access model: holds a set number of urgent appointments daily, based on the overall pattern of demand throughout the week.  Advanced access model: reserves a set percentage of appointments for same-day needs, a set percentage open a week or more in advance, and a set percentage with no restrictions on scheduling.  Demand: provider visits per day; visits per patient per year  Supply: provider days per year  Ideal panel size formula: panel size x visits per patient per year (demand) = provider visits per day x provider days per year (supply) | Time to 3rd next available appointment |

Notes: Population health: the publication addresses access to healthcare in general, supply-demand: the publication is focused on supply and demand within an organization with little reference to access to care as a broader perspective; continuity: is access to the patients’ healthcare provider of choice part of the definition? Some empirical studies were reported in more than one publication (see ID). More information on the included studies are available elsewhere44

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