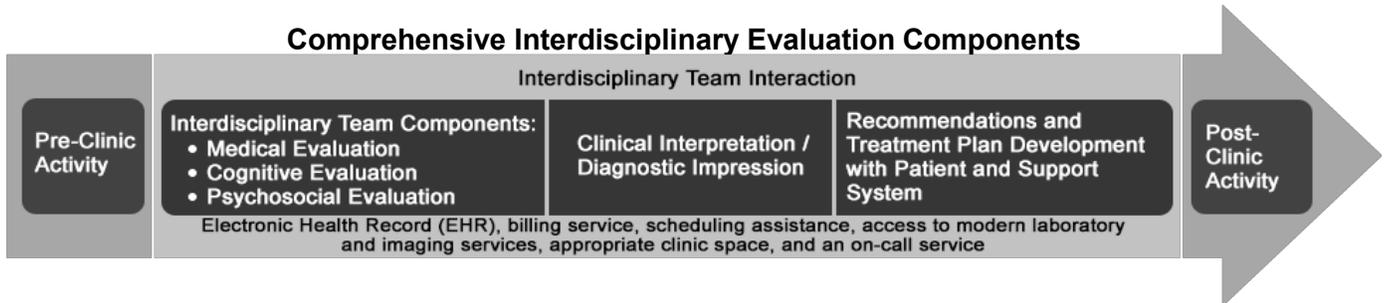Wisconsin Alzheimer's Institute
Comprehensive Interdisciplinary Diagnostic Evaluation
Major Components and Clinic Workflow Models

The Wisconsin Alzheimer's Institute's (WAI) comprehensive interdisciplinary diagnostic evaluation can be broken down into three major components or sub-set evaluations: a medical evaluation, a cognitive evaluation, and a psychosocial evaluation. The components are designated in a pillar format below to provide insight into the flow and structure of an appointment. Each task should be viewed independently, not necessarily done by the same clinician who completes other tasks in that evaluation component. The tasks delegation is typically contingent upon each clinician's scope of practice, credentialing, training, and skill set.

Comprehensive Interdisciplinary Evaluation Components

Interdisciplinary Team Interaction

| Pre-Clinic Activity | Interdisciplinary Team Components:
• Medical Evaluation
• Cognitive Evaluation
• Psychosocial Evaluation | Clinical Interpretation /
Diagnostic Impression | Recommendations and Treatment Plan Development with Patient and Support System | Post-Clinic Activity |

Electronic Health Record (EHR), billing service, scheduling assistance, access to modern laboratory and imaging services, appropriate clinic space, and an on-call service

Medical Evaluation
- History and Physical
  - Chief complaint
  - History of present symptoms
  - Review of systems
  - Past medical history
  - Past surgical history
  - Past psychiatric history
  - Family history
  - Social history
  - Substance use history
  - Allergies/adverse drug reactions
  - Medications
  - Physical exam
  - Labs (standard/specialized)
  - Neuroimaging (standard/specialized)

Cognitive Evaluation
- Screens for selection of Brief Cognitive Battery
  - MMSE,
  - MoCA,
  - SLUMS, or
  - Mini Addenbrooke Cognitive Exam
- Brief Cognitive Batteries
  - RBANS,
  - NCSE/Cognistat, or
  - Addenbrooke Cognitive Exam - Revised
- Additional cognitive measures (clinician preference)
  - Category fluency
    - Animal Naming Screen (fruits…)
  - Visual praxis
    - Clock Draw (preferred) or
    - Praxis items from CERAD
  - Word list learning
    - Word list from CERAD (preferred),
    - Rey Auditory Verbal Learning Test,
    - California Verbal Learning Test, or
    - Hopkins Verbal Learning Teat
  - Executive Function
    - Trail Making Test (preferred)
    - Stroop Color-Word Test, or
    - Wisconsin Card Sort Test
- Cognitive test interpretation

Psychosocial Evaluation
- Sleep
  - Epworth Sleepiness
  - STOP BANG
- Mood
  - GDS
- Behavior
  - NPI-Q
- Function
  - Lawton IADL
  - Katz Index of ADL
- Support system and caregiver burden
  - Zarit
- Psychosocial history
  - Ancestry and cultural influences
  - Education background
  - Vocational history
  - Leisure/recreational history
  - Transportation
  - Spiritual/religious influences
  - Housing
  - Legal history
  - Financial resources
- Safety/abuse and neglect
- Advance directives/planning/end-of-life

Sustainability of this specialty clinic will be impacted by the attention paid to the "Pre-Clinic Activity". Such activity includes establishing referral sources that are knowledgeable about the type of patients the team brings the most value to. The clinic appointments involve significant clinician resources; hence, slots are typically limited and should be utilized by more complex patients that benefit from an interdisciplinary diagnostic team.

There are numerous clinic workflows among the WAI Clinic Network. The clinic workflow used by an organization will depend upon the context of their clinic, the type of professionals on the team, the needs of their patients, and whether they provide a consult only service or additional ongoing care services. The following section will highlight four workflows; the two most used, and two that have features to consider.

Clinic Workflow 1 is WAI's founding model. It is a time-efficient model; with a two-hour appointment time for the patient and their support system, and one-hour of time for each clinician per patient. The clinic session starts with a 15-minute interdisciplinary team meeting to review the patients on the schedule for the session. The last 5-10 minutes of each patient hour is used for a brief interdisciplinary team meeting to discuss the patient just seen.

Clinic Workflow 1

Time	Cognition	Psychosocial	Medical
11:15 AM	Team Meeting	Team Meeting	Team Meeting
11:30 AM	Patient 1	Support System 1	Results/medication check appointments
12:30 PM	Patient 2	Support System 2	Patient/Support System 1
1:30 PM	Patient 3	Support System 3	Patient/Support System 2
2:30 PM	Patient 4	Support System 4	Patient/Support System 3
3:30 PM	Finished	Finished	Patient/Support System 4

Key terms used in clinic workflow models include *established* or *follow-up* patients and *retest* or *return* patients. **Established** or **follow-up** patients are patients that are seen after the initial comprehensive evaluation for such activity as medication and symptom management and test results (i.e. sleep study). The timing and frequency of the appointments will be contingent on the focus of the care needed. These appointments may be scheduled in a slot during the clinic session, as in Clinic Flow 1; or they may be scheduled individually or batched elsewhere in the physician or a nurse practitioner's schedule.

Retest or **return** patients have already had an initial comprehensive evaluation. They are returning for re-evaluation (re-testing), typically 6-12 months post the initial evaluation, or after an intervention or test has occurred. Retest appointments are also used when the diagnosis is not clear and the lapse of time is needed. Retest patients may be scheduled into a clinic slot, or they may be seen "outside" of the clinic schedule. Retest appointments are interdisciplinary, but may only use part of the team; for example, the cognitive tester and physician.

Frequently, patients will need additional diagnostic work-up (labs, imaging) to complete the comprehensive evaluation protocol. Hence, a second appointment will be scheduled to discuss the results and diagnosis. This appointment is often called a *results appointment* and varies in length, from 20-90 minutes. The

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appointment minimally includes the physician from the first appointment (Clinic Workflow 1); but can include other team members. Clinic teams that have master-level social workers or professional counselors on them, tend to include them in the results appointment. Clinic Workflow 2 is an example of such a model. In this model, the clinic will encourage patients to include as many support system members as appropriate to participate in the results appointment; often using teleconference, Skype, and Face-Time technology for support system members that are not local. In Clinic Workflow 2, the results appointments are batched together on a pre-determined day; i.e. every Thursday afternoon, or the fourth Tuesday of the month.

Clinic Workflow 2

Initial Appointment

Time	Cognition	Psychosocial	Medical
11:15 am	Team Meeting	Team Meeting	Team Meeting
11:30 am	Patient 1	Support System 1	Medication check appointments
12:30 pm	Patient 2	Support System 2	Patient/Support System 1
1:30 pm	Patient 3	Support System 3	Patient/Support System 2
2:30 pm	Patient 4	Support System 4	Patient/Support System 3
3:30 pm	Finished	Finished	Patient/Support System 4

Results Appointment

Time	Results Appointment
1:30 pm	Patient/Support System 7
2:00 pm	Patient/Support System 8
2:30 pm	Patient/Support System 9

Clinic Workflow 3 introduces two supplemental tasks for a comprehensive evaluation model, ***pre-screening*** patients for appropriateness for the clinic and ***pre-appointment paperwork***. Both tasks can be used in any clinic workflow. **Prescreening** can be done with some or all of individuals referred to the clinic. Clinics that prescreen all potential patients typically do a phone screen; some will require the completion of pre-appointment paperwork prior to doing the phone screen. Such clinics tend to see patients that have commercial insurance and require prior authorization; or the clinic maybe a part of a large healthcare system that has other specialty clinics that may better meet the patient's needs (i.e. psychiatry, neurology). The team member completing the psychosocial component will complete scheduled phone prescreens (triage) at the start of a clinic session. Several clinics train their schedulers to do a basic screen for appropriateness for the clinic. If the initial screen done by the scheduler is inconclusive, then a team member (often the social worker) will contact the patient and/or family for additional information to determine the appropriateness for the clinic.

A clinic may ask patients and their support systems to complete **pre-appointment paperwork**; having them send it in prior to scheduling, or they bring it in at the time of the appointment. The pre-appointment paperwork can include medical and functional history, psychosocial information, and other relevant details that is typically obtain from a collateral contact (support system member) for the comprehensive evaluation. The title of the paperwork varies depending upon its content; examples include Patient History Form, or Intake Form. Having this information in a written format at the start of the appointment tends to increase the efficiency of the appointment.

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In Clinic Workflow 3 the family waits while the patient does the cognitive testing; if they have not done the pre-appointment paperwork, they will use the time complete it. In this workflow, the patient and their support system are at the evaluation appointment for three hours in length; with each clinician spending one-hour of time on each patient.

Clinic Workflow 3

Time	Cognition	Psychosocial	Medical
12:15 pm	Team Meeting	Team Meeting	Team Meeting
12:30 pm	Patient 1	Scheduled phone pre-screenings	Results/medication check appointments
1:30 pm	Patient 2	Patient/Support System 1	Results/medication check appointments
2:30 pm	Patient 3	Patient/Support System 2	Patient/Support System 1
3:30 pm	Finished	Patient/Support System 3	Patient/Support System 2
4:30 pm	Finished	Finished	Patient/Support System 3

The final workflow covered is one that is conducive to a team that is a part of a larger primary care clinic. The team completes abbreviated, focused cognitive and psychosocial components. After consulting with the team members, the physician determines if a full neuropsychologist evaluation is indicated; if so, one is ordered and scheduled. Labs and imaging if indicated, are also ordered. Once the patient completes the additional work-up; they return with their support system for a results appointment. In Clinic Workflow 4, the patient and their support system are at the evaluation appointment for one hour; and each clinician spends a half hour of time on each patient.

Clinic Workflow 4

Time	Focused Cognition	Focused Psychosocial	Medical	2nd Appointment if needed Neuropsychology Appointment	3rd Appointment Results Appointment
12:45 pm	Team Meeting	Team Meeting	Team Meeting	Referred for a more extensive cognitive testing done by a psychologist	Patient and Support System seen in MD's regular practice for evaluation results.
1:00 pm	Patient 1	Support System 1	Primary care patients		
1:30 pm	Patient 2	Support System 2	Patient/Support System 1		
2:00 pm	Patient 3	Support System 3	Patient/Support System 2		
2:30 pm	Patient 4	Support System 4	Patient/Support System 3		
3:00 pm	Finished	Finished	Patient/Support System 4		

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