

## A Special Message from the Chief Medical Director

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Greetings,

In Programs of All-inclusive Care for the Elderly (PACE), Adverse Drug Events (ADEs) are of particular importance. Yet, data suggest that the majority of ADEs are both predictable and preventable.

I am writing to share an important study with you. [Association of a Novel Medication Risk Score with Adverse Drug Events and Other Pertinent Outcomes Among Participants of the Programs of All-Inclusive Care for the Elderly](#) is a review of a 12-month analysis of insurance claims to determine if the MedWise Risk Score™ (MRS), a feature of CareKinesis' proprietary software, relates to medical costs. The retrospective study, by Tabula Rasa HealthCare's (TRHC) [Precision Pharmacotherapy Research and Development Institute](#), looked at the medical claims of nearly 2,000 PACE participants to determine their MRS. The study demonstrates that the MRS, derived strictly from a medication regimen's pharmacological properties, was significantly associated with ADEs among PACE participants.

Indeed, the study concludes that in PACE, on an annual basis each *one-point* increase in the MRS corresponds to:

- \$1,037 in additional annual medical spending per participant;
- 3.2 additional annual emergency department visits per 100 participants
- 2.1 additional hospitalizations per 100 participants, and
- Nearly five additional participants out of every 1,000 participants having at least one ADE.

However, this is likely a gross underestimation. The literature indicates that ADEs are widely underreported, with several studies citing underreporting rates that exceed 90%.

### What This Means for PACE

People typically take more medications as they age, and the risk of adverse events may increase with the number of medications taken. We know that in nursing homes, for every \$1 spent on medications, an additional \$1.33 is spent on treating the resulting ADEs. The costs in PACE are likely similar.

PACE organizations need a way to know which members may be at greatest risk of medication-related problems, like falls, that can result in ER visits and hospitalizations. Partnering with CareKinesis, a service of CareVenture HealthCare, a division of TRHC, offers a way to identify medication related risks at the point of prescribing: the MedWise Risk Score. The MRS is a quick and easy way to assess which patients are at highest risk for adverse drug events and may require immediate medication management attention. Armed with this tool, a prescriber can intervene to improve therapeutic outcomes and subsequently reduce unnecessary medical and pharmacy expenditures.

Unlike other risk predictors, this tool produces actionable information that the pharmacist and PACE providers can use easily to reduce risk. The MRS can be used to risk-stratify participants and predict a host of important and relevant outcomes pertaining to medication related morbidity.

### **Optimizing Use of the MedWise Risk Score**

As a leader of a PACE organization, you may ask how your clinicians can best use the MRS. There are three steps to using the MRS in practice:

1. **Stratify:** Use the MedWise Risk Score to identify your participants with risk scores greater than 25, then 20, then 15.
2. **Assess:** Determine the reason for a participant's high risk score and discover opportunities to mitigate risk, improve safety, and reduce the MRS. Critical times to assess an individual's MRS are during care transition, annual/semiannual assessment, new enrollment, and medication changes.
3. **Intervene:** Discontinue medication if harms outweigh benefits, there is minimal or no effectiveness, no indication, or if the participant is not taking the medication. Be sure to plan, communicate, and coordinate medication changes with the participant, caregiver, and other healthcare providers. Remember to cancel discontinued medications in the Electronic Health Record and remove discontinued medications from the home.

As you or your prescribers become more comfortable using the MRS, you will find the tool will empower your team to practice proactive care instead of reactive care, and it will serve as a guide in making clinical decisions about participants with polypharmacy to prevent ADEs.

You may think there simply is not time to take these extra steps. As a former PACE Medical Director, I know well the time constraints that clinicians face. However, I also know that making time to use the MRS is beneficial for several reasons:

1. It is the right thing to do. The MRS assesses risk for your participants. If we have a tool available that enables us to provide optimized, personalized care and lessen risk, we should use it.
2. It improves care. The MRS enables prescribers to personalize a patient's medication regimen for better medical outcomes, including reduced risk of ADEs.
3. It reduces costs. Operating in a capitated payment model means that every dollar counts in PACE. The time spent using the MRS and determining alternative therapies today results improved financial outcomes in the future: cost savings from fewer adverse events, fewer visits to the ER, and fewer hospitalizations.

In my PACE practice, I used elements of the MRS as they developed into what is now the MRS. I know firsthand that this information can help a clinician deliver personalized care that results in optimal outcomes, both for the patient and for the PACE organization.

Finally, while mitigations of high MedWise Risk Scores are indeed *personalized* interventions, you will find it most helpful to request a one-time pharmacogenomic test, which upgrades the intervention from *personalized* to *precision*. An earlier study found that 99.7% of 296 PACE participants had at least one pharmacogenomic variant, and more than one-third had four or more variants.<sup>1</sup> The variants were in genes that produce enzymes to metabolize drugs, proteins that transport drugs, and hereditary receptors that effectuate drug response.

I encourage you to take advantage of this unique tool and see for yourself how your patients can benefit. For more information on the MedWise Risk Score and CareKinesis services, please contact [info@CareKinesis.com](mailto:info@CareKinesis.com) or (888) 9-PharmD (888-974-2763).

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Read more about the Medication Risk Score in PACE study [here](#).

Bain KT et al., Implementation of a pharmacist-led pharmacogenomics service for Program of All-Inclusive Care for the Elderly, J American Pharmacists Association. 2018; 58:281-9.