



Teachers' Retirement System of the State of Kentucky

KRTA Annual Convention

April 26, 2022

Gary L. Harbin, CPA
Executive Secretary

Doing It Right

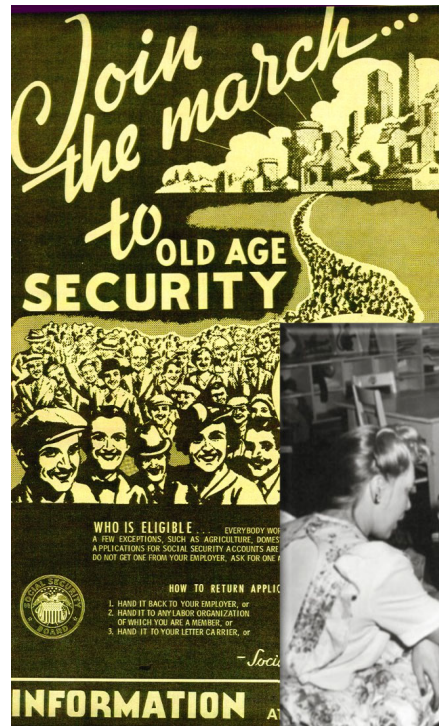
What That Means at TRS



Providing security for Kentucky's retired teachers using a long-term investing process proven and refined over decades, avoiding the whims of the day, to achieve top returns on investments at the lowest costs.



History



TRS Early History

Social Security created

Teachers not covered because of constitutional concerns about federal taxing state and local governments

1935

1936

1938

1940

1950s

TRS established

By General Assembly in special session

TRS opens

After initial funding received

University of Kentucky study

Finds state's teachers can't afford to retire, and that Kentucky had trouble attracting and retaining teachers

Social Security expands

Some states and groups – including Kentucky teachers – do not enter because of added cost of Social Security; universities vote to opt into Social Security

Consistency

Number of founding members of TRS
receiving a benefit as of June who were
members when the doors opened July 1, 1940

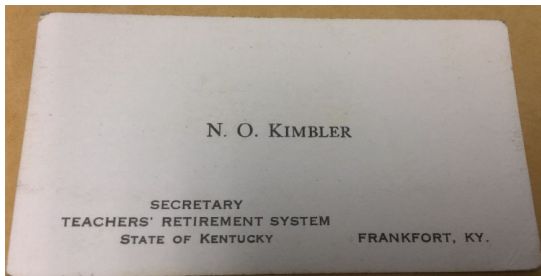
10

As of fall 2021

Executive Secretaries



N.O. Kimbler 1940-1957



James L. Sublett



Ted Crosthwait



Pat N. Miller



Gary L. Harbin

1958-1970

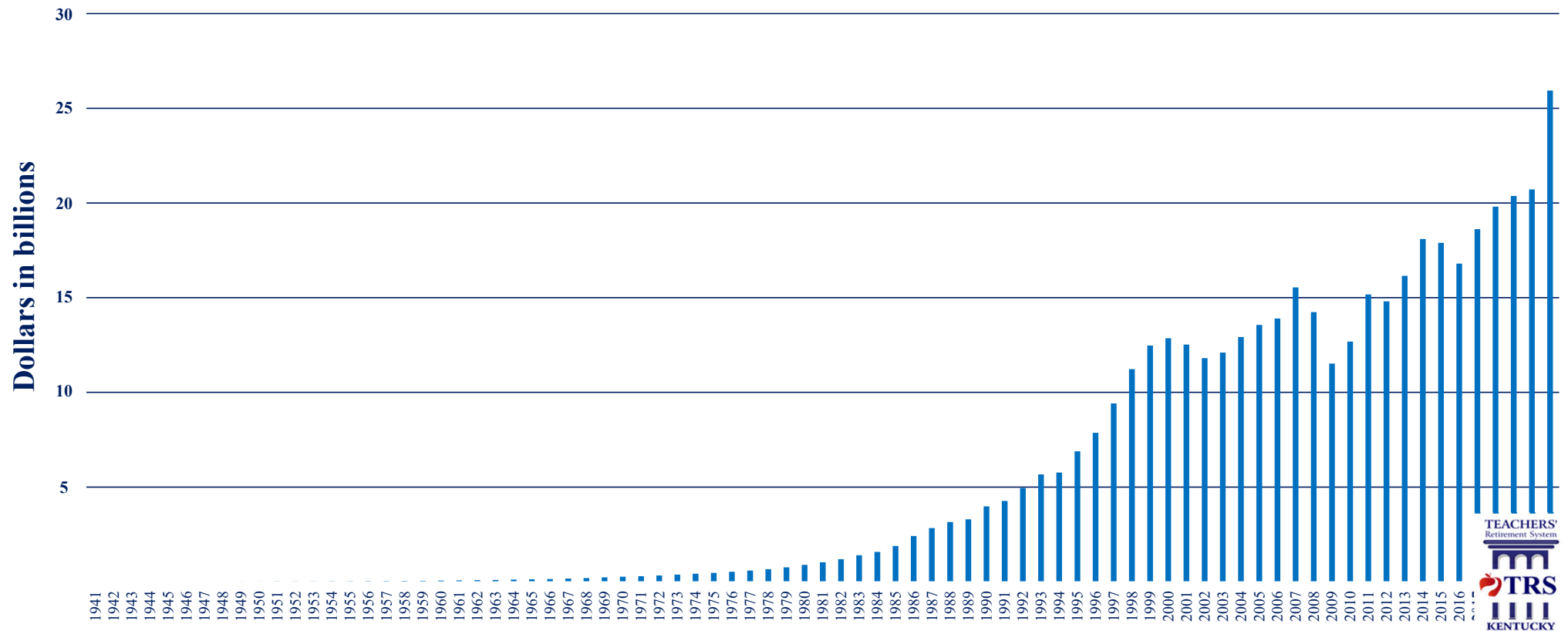
1970-1976

1976-2000

2000-present

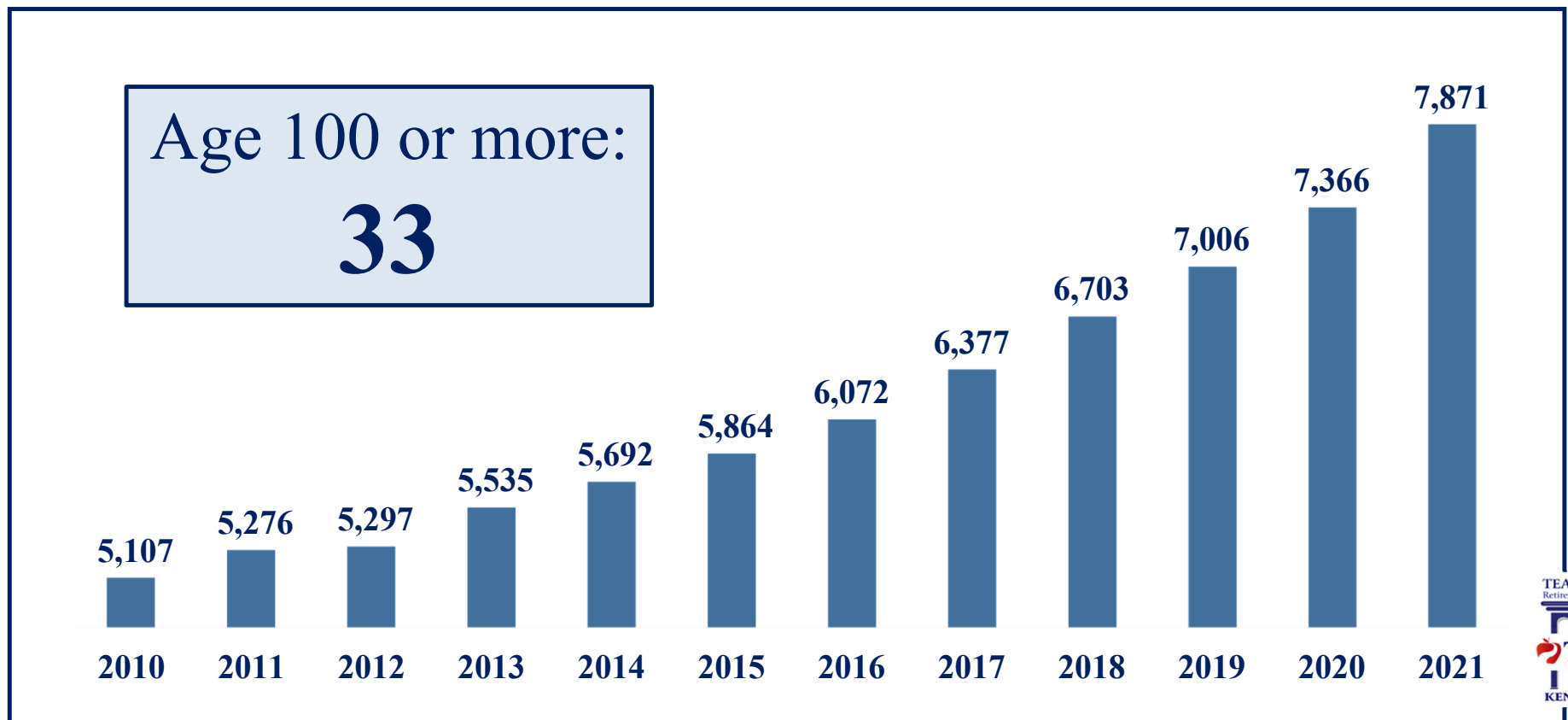
How Has It Worked For TRS?

Retirement Annuity Assets Over 82 Years



TRS Benefits Protect Teachers

Retirees over 80 as of Dec. 31



Retired Teachers' Benefit Kentucky

- TRS pays retired teachers:
 - \$209.6 million in retirement annuity benefits (*July 2021*)
 - \$16.6 million in medical benefits (*monthly average*)
- 91% of TRS pension benefits stay in Kentucky
- 88% of TRS retirees live in Kentucky
- \$2 billion a year paid into Kentucky's economy because of pension benefits



Board of Trustees

Fiduciaries of TRS



**ALISON
WRIGHT**

Chair, Georgetown



**HOLLIS
GRITTON**

Vice Chair, Union



**BILL
ALVERSON**

Paris



**ALLISON
BALL**

State Treasurer



**JOHN
BOARDMAN**

Lexington



**FRANK
COLLECCHIA**

Louisville



**JASON
GLASS, Ed.D.**

*Education
Commissioner*



**BRENDA
MCGOWN**

Bowling Green



**LYNN
PATTERSON, Ed.D.**

Murray



**LAURA
SCHNEIDER**

Walton



**JOSH
UNDERWOOD**

Tollesboro

Trustee Elections Each Spring

April

TEACHERS' RETIREMENT SYSTEM
PATHWAY

TRS ID :
User Name:

Member Accounts

- Home Page
- My Accounts
- Benefit Estimates
- Applications

Related Tasks

- Personal Information

Active Member Home

Welcome to the TRS Member Self Service (MSS). MSS is a secure website where you can view profile. If applicable, you can also perform retirement benefit estimates.

Alerts & Messages
You have 0 new message(s)

Board of Trustees Election
View Ballot and Vote

Personal Information

Member Account
View Member Account Details

May

Please complete the ballot below, tear on perforation and mail. NO POSTAGE NECESSARY.

TEACHERS' Retirement System
TRS KENTUCKY

This year the membership will be selecting one lay trustee and one active teacher trustee.

Please vote for ONLY ONE Lay Trustee and ONLY ONE Active Teacher Trustee.

An extra line is provided if you prefer to vote for a write-in candidate.

OFFICIAL BALLOT
Election of Board of Trustees Members per KRS 161.260
Mail no later than May 31,

Candidates for Lay Trustee

- 1.
- 2.
- 3. _____

Candidates for Active Teacher Trustee

- 1.
- 2.
- 3. _____

TRS OFFICIAL BALLOT NUMBER: 12345

All contributing members and retirees have the privilege to vote



This Year's Elections

Active Teacher Trustee



Dr. Ben Littlepage



Dr. Denise Vulhop Watkins

Lay Trustee



Hollis Gritton



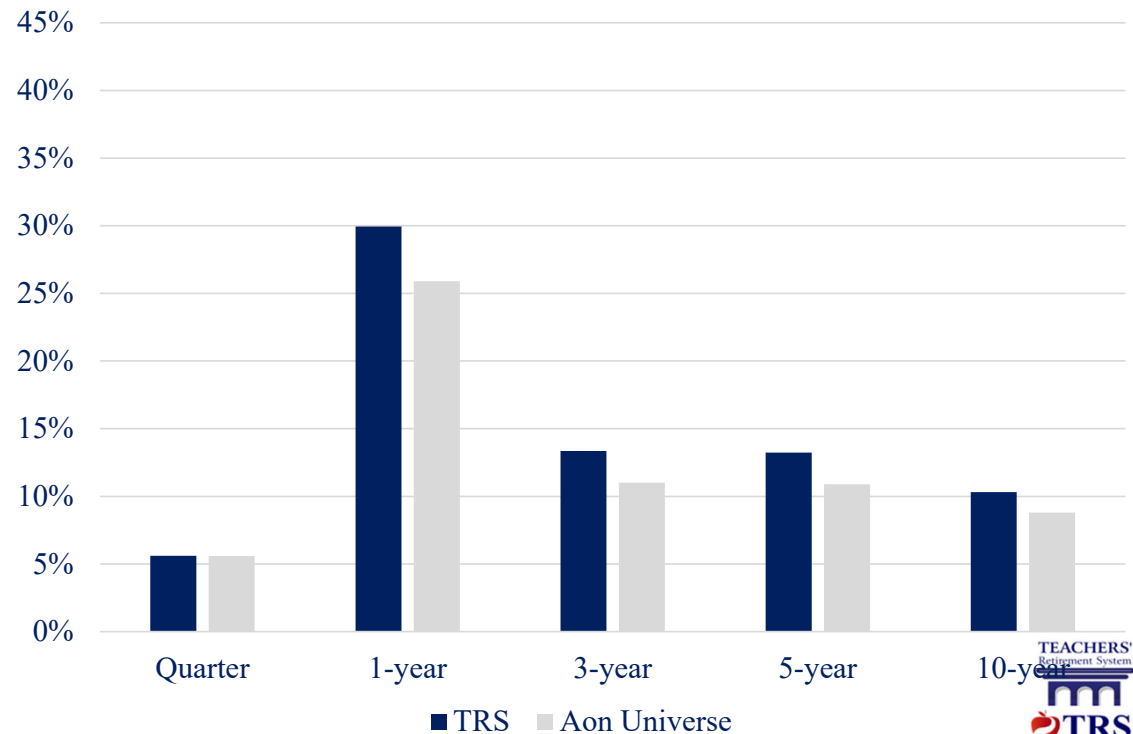
Paul Bruce

Investment Performance

Retirement Annuity Trust Gross Returns as of June 30, 2021

	TRS	Aon Rank
1-year	29.94%	Top 22%
3-year	13.34%	Top 7%
5-year	13.23%	Top 3%
10-year	10.32%	Top 4%
20-year	7.53%	N/A

30-year compounded
8.59%

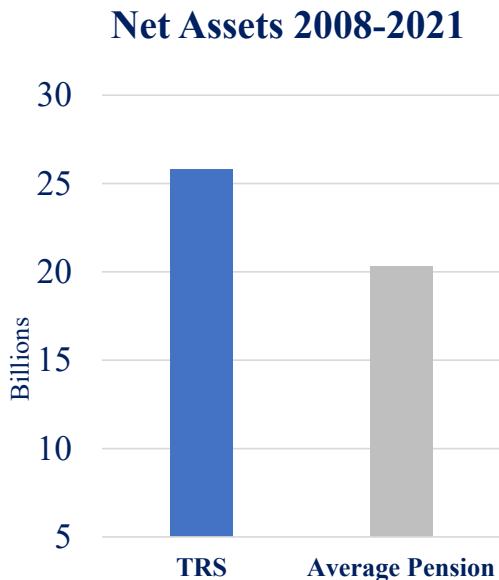


Investment Performance

Top 10 Returns

Rank	Year	Return
1	2021	29.94%
2	2011	21.60%
3	1997	19.60%
4	1998	19.40%
5	2014	18.10%
6	1995	16.90%
7	2017	15.37%
8	2007	15.30%
9	2013	14.10%
10	1996	13.50%

Investment Performance



From 2008 to June 2021, TRS investment returns resulted in net assets of \$25.8 billion, compared to the average plan's \$20.4 billion.

This outperformance generated \$5.4 billion to the benefit of Kentucky's teachers and taxpayers.

Actuarial Status

As of June 30, 2021



Dollars in billions

	Assets	Liabilities	Unfunded	Percent
Retirement Annuity Trust	\$ 22.6	\$ 39.6	\$ 17.0	57.2%

Actuarial values



Funding Decisions

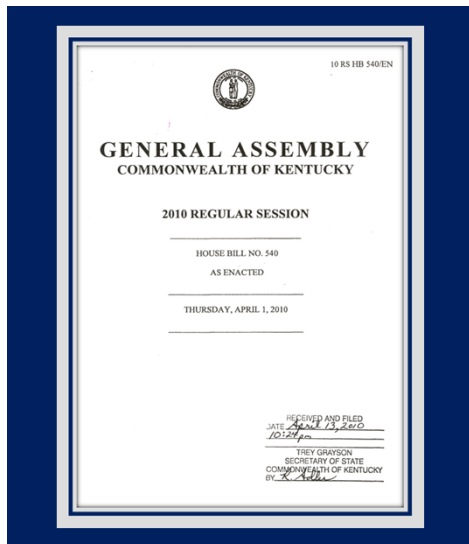
2022-24 Biennial Budget

- Means eight straight years of full or nearly full annuity funding
- More than \$1.36 billion to meet actuarially required contribution for annuities
 - About \$900 million more to TRS in salary contributions from education budget
- \$149 million for state statutory contribution for under-65 health insurance under Shared Responsibility
- \$479.2 million to pay off liabilities for certain previously awarded benefits that had been amortized over several years
- \$78 million up front for sick leave-related annuity liabilities projected to occur from retirements in next two years

Shared Responsibility

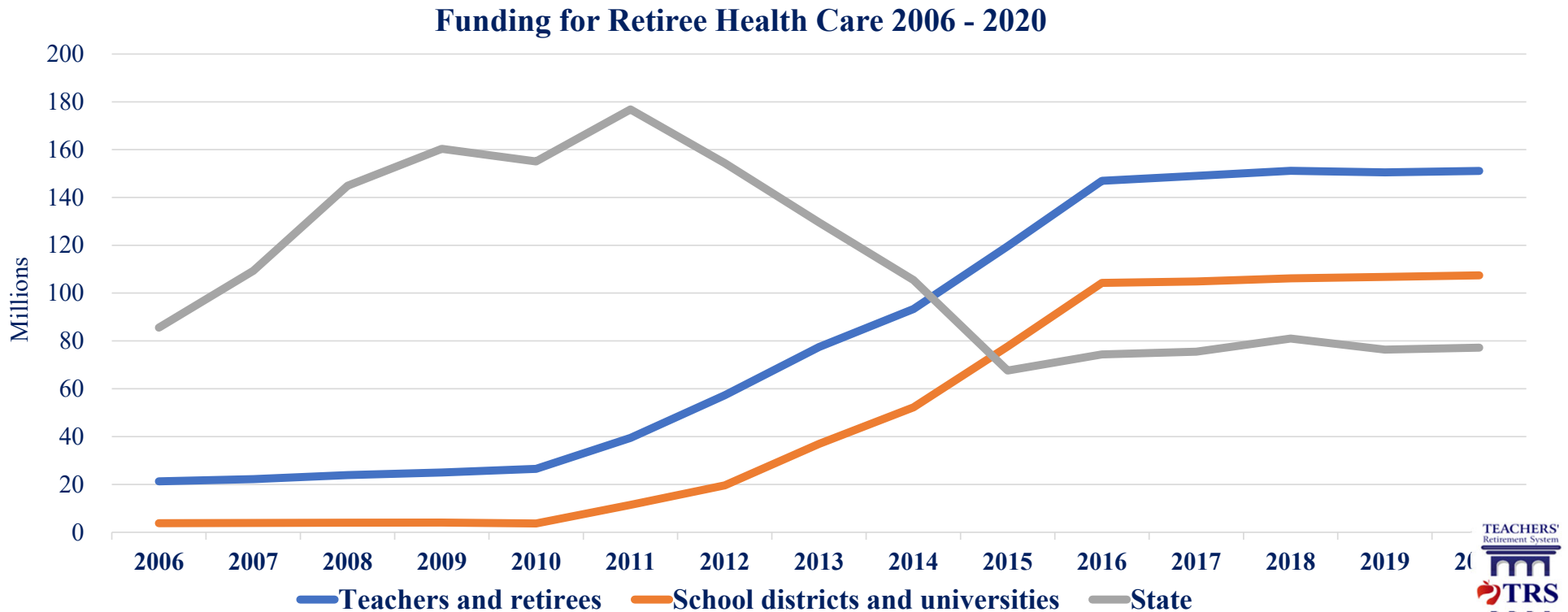
In Second Decade

Shared solution providing permanent funding for retiree health care



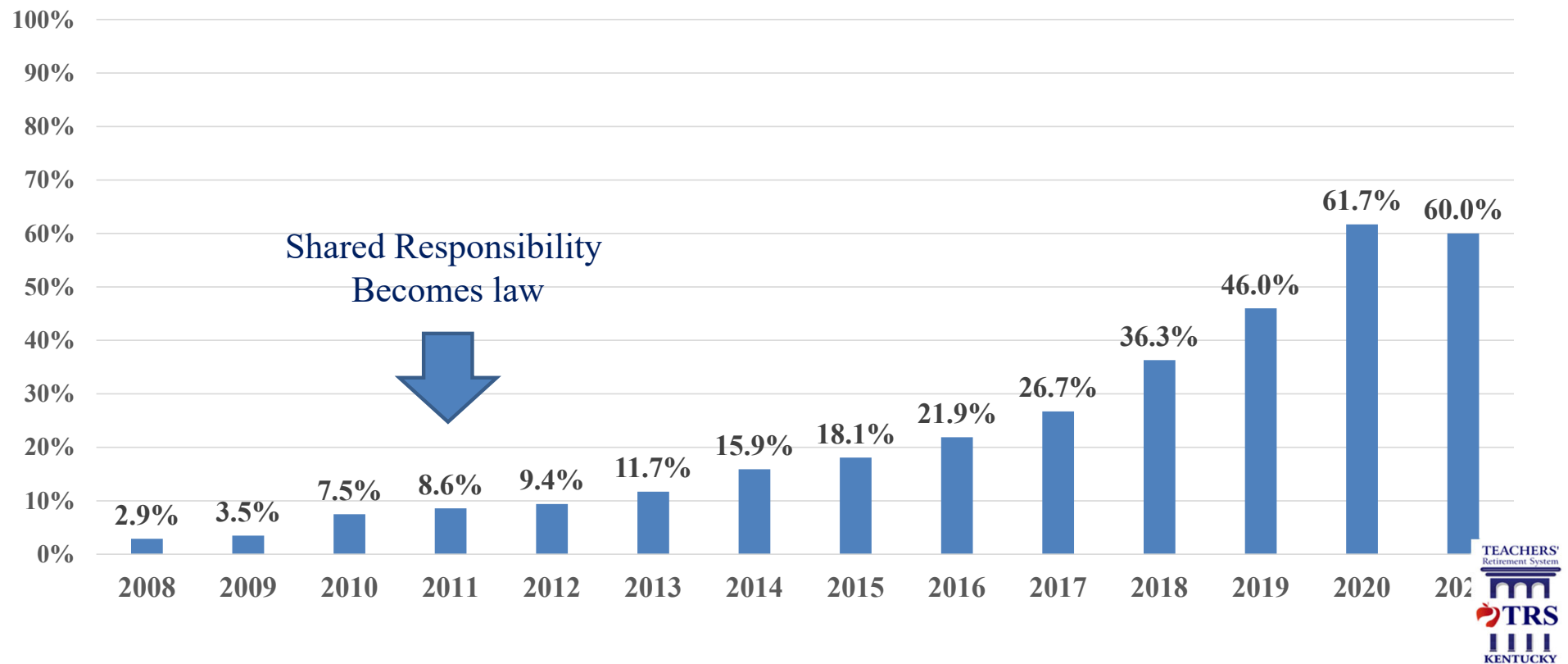
Shared Responsibility

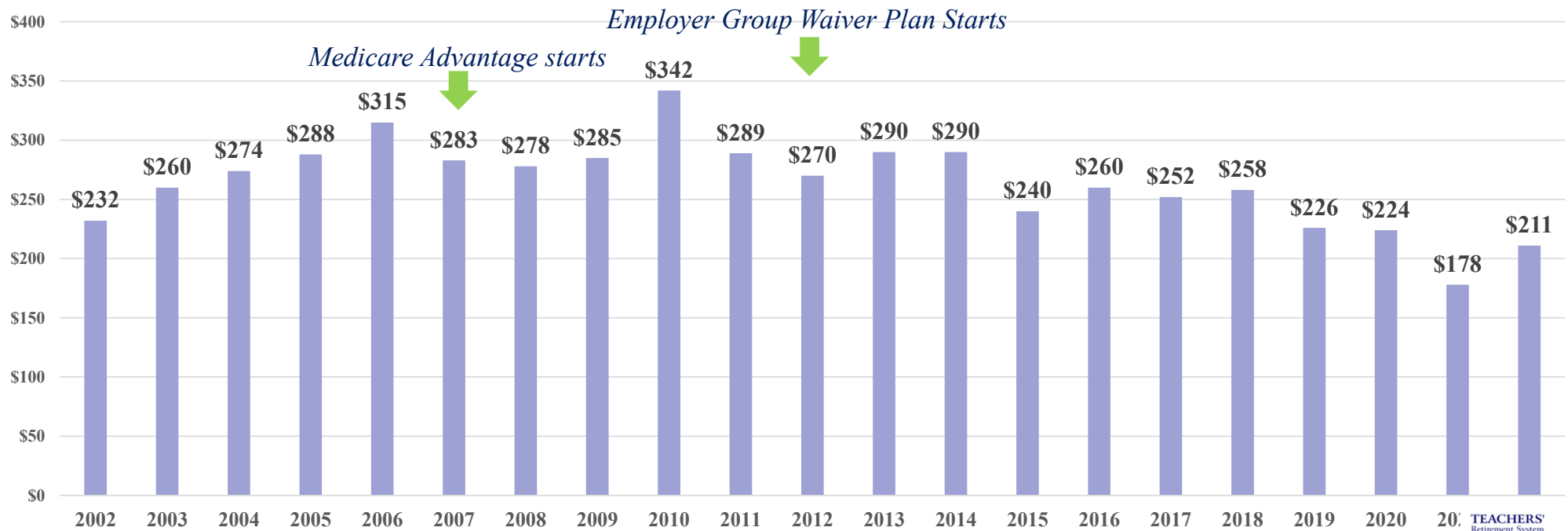
How the Cost Has Been Shared



TRS Health Insurance

Funded Status



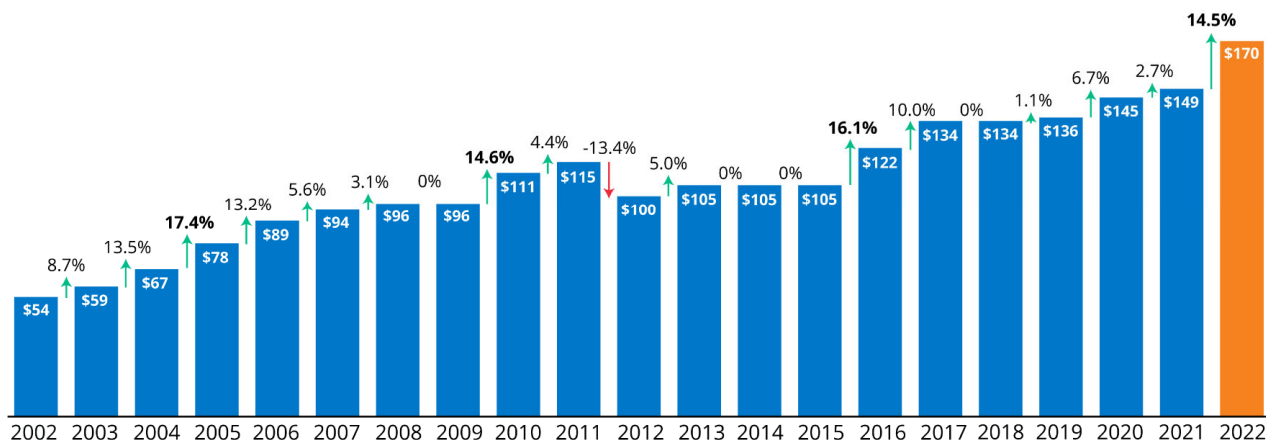


Premiums Held Almost Constant For 20 Years

Medicare Part B History

The Medicare Part B Premium Rose to \$170.10 per Month in 2022

14.5% Increase is Among the Largest in Program History



NOTE: Monthly premiums are rounded in this exhibit.

SOURCE: KFF analysis of the 2021 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds and CMS, "Medicare Program; Medicare Part B Monthly Actuarial Rates, Premium Rates, and Annual Deductible Beginning January 1, 2022," 86 Federal Register 64205, November 17, 2021.



Source: Kaiser Family Foundation



Formulary Change

- Based on recent and projected prescription costs increases
- New formulary already used by University of Kentucky retirees
- The new formulary offers medication for everything that the old formulary did.

KEHP

MEHP

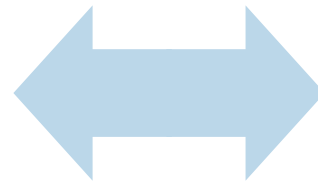
Personalized Medicine



TRS Solution: Personalized Medicine Partnership

CORILL
LIFE SCIENCES

You
Your Doctor
Your Pharmacist



KEHP

MEHP

Personalized Medicine

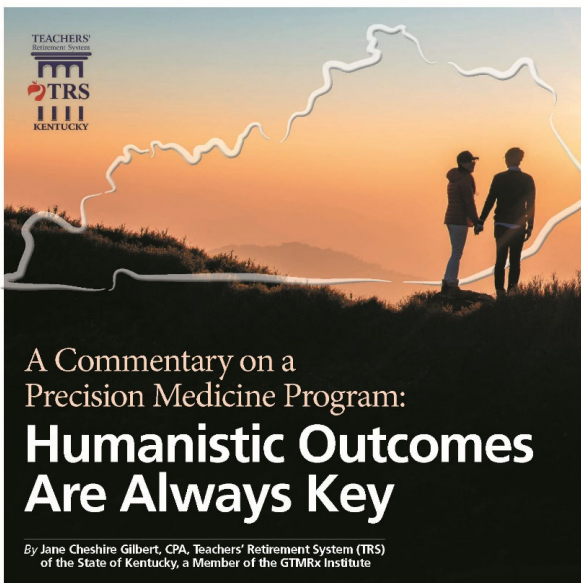
Why It Works

- Helps avoid taking ineffective medications that even could be fatal
- Saves money for retirees and their insurance trust
- Uses DNA testing to help doctors making treatment decisions
- Results help make sure medications are beneficial from the start
- Avoids traditional trial-and-error process without DNA information

Personalized Medicine

Genetic Testing Wellness Program Gets National Attention

Journal of Precision Medicine



TEACHERS' Retirement System
TRS
KENTUCKY

A Commentary on a Precision Medicine Program: Humanistic Outcomes Are Always Key

By Jane Cheshire Gilbert, CPA, Teachers' Retirement System (TRS) of the State of Kentucky, a Member of the GTMRx Institute

Introduction: GTMRx and TRS Kentucky Precision medicine meets personalized medicine in cases like the TRS retiree (quoted in #1) who voluntarily submitted a saliva sample for testing. Such a simple act, one of the many by TRS retirees, yields long-term return on the scientific and financial investments made by TRS to achieve its precision medicine goals. Moreover, TRS puts

these goals into human terms, showing how real people express in their own words how precision science benefits them. Are there any better words a pharmacist or doctor could hear? Or for those inside the pharmacogenomics research world and academia? Or for that matter, the director of health care for Kentucky's retired teachers?

In the past few years, TRS has made countless virtual presentations on this program to others

interested in their employees' and retirees' wellness, drug cost containment and precise use of science that now is well over a decade old. In addition, TRS has presented its program to many health care professionals, including doctors and health plan administrators at the National Institutes of Health in Bethesda, Maryland; attendees at the Personalized Medicine Coalition meeting at Harvard in Massachusetts; and, now, readers of

#3 A deep dive into our population discovered that 84% of retirees are on medications that are influenced by genetics. Medicare-eligible retirees were on an average of 15 prescriptions. Roughly 75% of the population had high blood pressure, 58% had high cholesterol and 50% were suffering from pain and inflammation. Using de-identified claims information, the PGx vendor provided an in-depth analysis of the possible return on investment with the program which found: 10% of members should stop taking a prescription immediately (potential savings: \$1.7 million), 57% of members might need to adjust dosage (potential savings: \$10 million) and 33% of members have a better alternative medication available.

Doctor-Patient Reports and Consultations
CLS develops a personalized medicine report that includes the relevant genetic data as well as known drug-drug interactions, lifestyle factors and other relevant information. TRS made sure that if a retired teacher wanted to have their DNA tested, a pharmacist was in place who could communicate the results to the patient in language they understood. Pharmacists have developed medication action plans for the 7,800 program enrollees. Both the patient and the physician receive a copy of the plans, which explain the results of the testing and the pharmacist's recommendations. After those conversations with patients, the pharmacists then reach out to the prescribing physician, with the patient's permission, and discuss the recommended medication changes. And those recommendations are taken seriously. The physicians' acceptance of the initiative is gratifying and astounding — and key to validating the program. Prescribing physicians almost universally accepted the pharmacist's recommendations — 80% of the time. Like the retirees, physicians were generally appreciative. TRS heard a lot of positive feedback, such as "you're helping me become a better doctor, to take better care of my patients and to be able to prescribe the right drug at the right time for them."

Of the medication action plans delivered for those enrolled in the program, 64% resulted in medication changes. Over 40% of the suggested medication changes are directly related to DNA-drug interactions. The rest are the result of what CLS calls the "halo effect" of working with

#4 Communicating with members early and consistently contributed to the program's successful launch. The overarching message: TRS is making smarter use of the health care dollar through the program because taking medications that do not work is bad for the member's health and for the TRS health insurance fund.

the pharmacists and, for example, switching to a generic. Other examples from this medication therapy management process — in which the pharmacist spends about an hour with a patient — include identifying drug-to-drug interactions, side effects and other issues. The process of "test, report, consult" avoids the possibly tall trial-and-error type of prescribing

known as titrating and playing with the dosage. In keeping with GTMRx, TRS hopes the medication is right the first time, saving members considerable pain and suffering and saving the plan a lot of money. The outcomes have proven the concept. According to CLS, costs grew 12% faster for those not enrolled in the PGx program than enrollees, based on charged amounts for medical claims at an 18-month evaluation. About \$12 was saved on charged claims for every \$1 spent on PGx program costs. Despite those initial results, PGx still faces resistance — in no small part from the

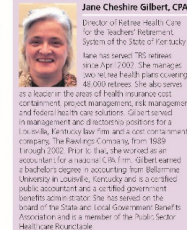


#5 TRS heard a lot of positive feedback, such as "you're helping me become a better doctor, to take better care of my patients and to be able to prescribe the right drug at the right time for them"

in collaborative practice with the physician to target correct therapies reduces the trial-and-error approach to prescribing. And TRS experience provides a path toward getting there as a widespread, accepted standard of care. Retirees are available to guide those new to these concepts. In April, the GTMRx Institute released the GTMRx Employer Toolkit, a suite of resources to equip employers with the knowledge to manage and control medication therapy problems more effectively through their pharmacy benefit programs and medical carriers. The toolkit is designed to help educate, guide and assist employers as they work with solution providers. A pharmacist-led, person-centered, team-based, standardized and rational approach to medication use empowers employees to leverage PGx testing and moves us all toward a more precise and personalized care process. TRS continues to educate Medicare Advantage carriers and PBMs of the need for PGx inside these federal programs. Including PGx in Medicare Advantage and Medicare Part D would help continue to control the TRS Medicare-eligible Health Plan Premium. The 2021 monthly premium is \$178, down 55% (not adjusted for inflation) from 20 years ago due to decreased federal revenues

determination to allow PGx when specific criteria are met. Second, on the insurer side, some large companies, including United Healthcare, have incorporated the use of PGx to include, for example, reimbursement for certain patients with depression. In addition to these positive signs, the accumulation of data and the weight of evidence will dictate that PGx becomes the standard so that patients are not on a drug that is ineffective or unsafe for months or years. **What's next?** To implement PGx, engage your medical plan carrier and your pharmacy benefit manager (PBM) in this conversation. PBMs will see the value in lives saved, improved health outcomes and reduced costs. PBMs will come to recognize the value of PGx as a tool to optimize medication through comprehensive medication management (CMM).¹⁴ Introducing a pharmacist who wrote

and heightened care management inside these federal programs. PGx, if included in these federal programs, would bring greater cost efficiency. In the end, the most rewarding part of the program, as indicated earlier, is not only the medication change that results from the testing and/or the dollars saved, it is also the reactions of Kentucky's retired teachers who take part in the program and the thanks TRS receives for actually running these tests. The story will get better because this wellness and science program is a lifetime benefit for each Kentucky retired teacher who volunteered to provide a DNA sample. Testing results that already have paid dividends for the retirees and their health plan can continue to inform every aspect of their pharmaceutical treatment for the rest of their lives. ■



Jane Cheshire Gilbert, CPA
Director of Retiree Health Care for the Teachers' Retirement System of the State of Kentucky. Jane has served TRS without interruption since April 2007. She manages over 100 health plans covering 48,000 retirees. She also serves as a leader in the area of health insurance cost containment, pre-claim management, risk management and focused health care solutions. Jane has served in a leadership position at numerous positions for a Louisville, Kentucky law firm and a cost containment manager. The Rankings Company from 1999 through 2002. Prior to law, she worked as an accountant for a major U.S. firm. Gilbert earned a bachelor's degree in accounting from Bellarmine University in Louisville, Kentucky and a certified public accountant and a certified government benefits administrator. She has served on the Board of the State and Local Governmental Benefits Association and is a member of the Public Sector Healthcare Practitioner.

References

1. Gilbert, J. "Sweet W. Testing outside the pillbox: medication adherence is key to healthy seniors." *High Trust* (2020) 17(1): 10-12. <https://www.hightrust.com/insights/2020/04/20/10-12-gilbert-sweet-w-testing-outside-the-pillbox-medication-adherence-is-key-to-healthy-seniors/>
2. Wamboldt, M. et al. "Cost of Health and Medication-Related Hospitalizations." *Health Affairs* (2019) 38(12): 2075-2080. <https://doi.org/10.1136/hlthaff.2019.017298>
3. <https://www.fda.gov/oc/2019/04/23-fda-releases-guidance-on-pharmacogenomics-testing>
4. The American College of Precision Medicine. *Pharmacogenomics in the Era of Precision Medicine*. (2019). <https://www.acpmed.org/2019/04/23/precision-medicine-in-the-era-of-precision-medicine/>
5. <https://www.fda.gov/oc/2019/04/23-fda-releases-guidance-on-pharmacogenomics-testing>

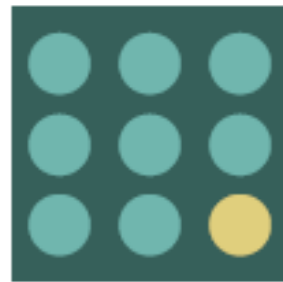
TEACHERS' Retirement System
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KENTUCKY

KEHP

MEHP

Personalized Medicine

Peer-Reviewed Initial Results Receive Attention



Journal of
*Personalized
Medicine*

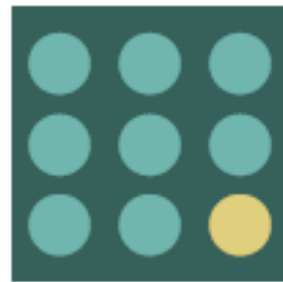
- 66% had genetic risks detected in a current medication
- 14.9% reduction in inpatient visits
- 6.8% reduction in emergency room visits
- \$37 million savings in direct medical charges over 32 months

KEHP

MEHP

Personalized Medicine

Peer-Reviewed Initial Results Receive Attention



Journal of
*Personalized
Medicine*

- \$37 million savings in direct medical charges over 32 months
- 66% had genetic risks detected in a currently prescribed medication
- 14.9% reduction in inpatient visits
- 6.8% reduction in emergency room visits
- \$218 savings a month per member, which equates to \$7,000 a member
- Return on investment of about 1,422%

KEHP

MEHP

Personalized Medicine

One Retiree's Story

I am *so grateful* for the information that was given to me and my physician. I was taking metropolol for my *heart condition*. Your tests showed that it *stayed too long in my system*. I sometimes had the feeling that I was on the verge of *fainting*. *I had not had that feeling since I started taking the new suggested medication*. I thank you from the bottom of my heart.

– Member, Teachers' Retirement System of the State of Kent



KEHP

MEHP

Personalized Medicine

How to Sign Up

MEHP enrollees can contact Coriell at 888-454-9024 or www.coriell.com/trs to request free DNA kit.

MEHP

Non-Medicare KEHP enrollees can contact Coriell and use HRA funds to pay the \$360 cost.

KEHP

CORIELL
LIFE SCIENCES



A GOVERNMENTAL PURCHASING COLLABORATIVE



KEHP

MEHP

Personalized Medicine

Reaching Further After Success of Pharmacogenomics



Pharmacogenomics
Fall 2017



Breast Cancer Index
2021



Possible Non-Small Cell
Lung Cancer
2022

MEHP

What's Jane Say

If Some Old Quarterback Says You Need More Coverage ...

Tell Joe (and others like him),
“No!”

If you are enrolled in the TRS Medicare Eligible Health Plan (MEHP), enrolling in another Medicare Advantage plan would “dynamite” your TRS MEHP coverage.



TRS and You

Updates

- Retiree Annual Statements
- Pathway
- How TRS communicates with you
- Why we continue to take precautions
- TRS 4 and branding launched

Retiree Annual Statements

Summarizes

- Personal information on file with TRS
- How to update that
- Annuity benefits received
- Federal and Kentucky state tax withholding
- How to change withholding
- Retiree health insurance
- Beneficiary information
- Annuity automatic deposit information
- Payment dates

Teachers' Retirement System of the State of Kentucky
479 Versailles Road
Frankfort, KY 40601-3800

This statement was prepared especially for:

STATEMENT OF RETIREE BENEFIT ACCOUNT

This is an important financial document for your information, but it is not a tax record. For taxes, use the IRS Form 1099-R, which TRS mails at the end of each January. Account information is subject to correction by TRS upon discovery of any error or any conflict with state or federal law. Review all information on this statement and contact TRS regarding errors or other concerns.

Personal Information

Your personal information can be updated directly through Pathway (<https://mss.trs.ky.gov/>) or by printing the form from Pathway or the TRS website (<https://trs.ky.gov/>) and mailing the completed form to TRS at the address shown above. It is important to keep your contact information on file with TRS updated.

TRS ID	Date of birth	Phone	Email

Retirement Account Summary

Service retirees are guaranteed a lifetime annuity with a 1.5% cost-of-living adjustment (COLA) each July. For retirement option descriptions, see the TRS website <https://trs.ky.gov/active-members/retirement-planning/options/>

Benefit type	Retirement date	Retirement option	Gross monthly annuity

2020 Benefits Paid By TRS			2020 Annuity Deductions			
Annuity payments	Insurance premiums	Total	Insurance premiums	Federal tax	Kentucky tax	Other deductions

Through December 2020, TRS has paid you a cumulative lifetime annuity benefit of \$

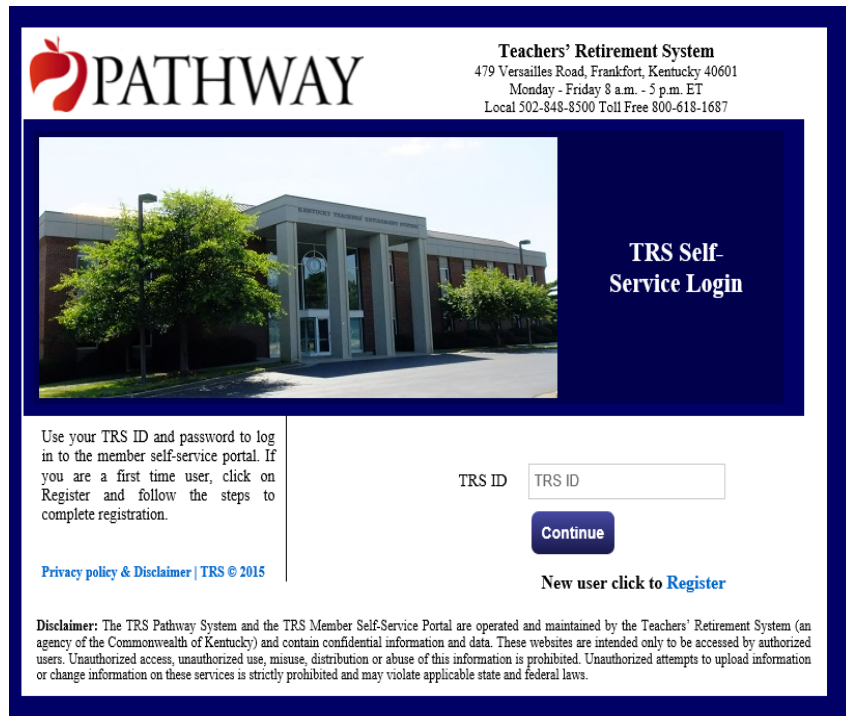
Account information is subject to correction upon discovery of any error or conflict with state or fe

Don't return with changes; using appropriate form or Pathway (<https://mss.trs.ky.gov/>).



Using Pathway

Real-time online access to account information



The screenshot shows the TRS Pathway login interface. At the top left is the PATHWAY logo. To its right is the Teachers' Retirement System contact information: 479 Versailles Road, Frankfort, Kentucky 40601, Monday - Friday 8 a.m. - 5 p.m. ET, and Local 502-848-8500 Toll Free 800-618-1687. Below the logo is a photo of a school building with the text 'TRS Self-Service Login' overlaid. The main login area contains a text box for 'TRS ID', a 'Continue' button, and a link for 'New user click to Register'. A disclaimer at the bottom states that the system is operated by the Teachers' Retirement System and contains confidential information.

Teachers' Retirement System
479 Versailles Road, Frankfort, Kentucky 40601
Monday - Friday 8 a.m. - 5 p.m. ET
Local 502-848-8500 Toll Free 800-618-1687

PATHWAY

TRS Self-Service Login

Use your TRS ID and password to log in to the member self-service portal. If you are a first time user, click on Register and follow the steps to complete registration.

TRS ID

[Continue](#)

[New user click to Register](#)

[Privacy policy & Disclaimer](#) | TRS © 2015

Disclaimer: The TRS Pathway System and the TRS Member Self-Service Portal are operated and maintained by the Teachers' Retirement System (an agency of the Commonwealth of Kentucky) and contain confidential information and data. These websites are intended only to be accessed by authorized users. Unauthorized access, unauthorized use, misuse, distribution or abuse of this information is prohibited. Unauthorized attempts to upload information or change information on these services is strictly prohibited and may violate applicable state and federal laws.

Pathway: <https://mss.trs.ky.gov>

Links on any TRS website page

App: TRS Pathway

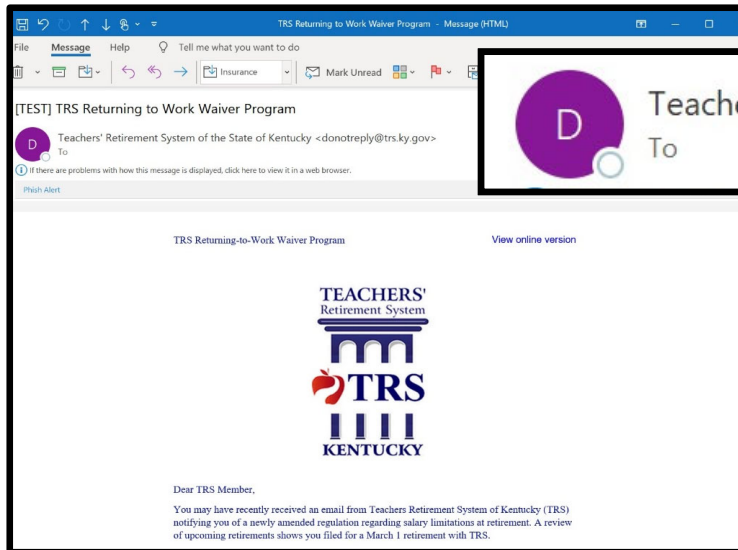
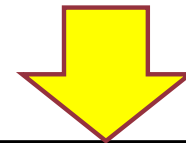
Download



What You Can Do in Pathway

- Edit or view personal information
- View active or payee account details
- Submit a request
- View schedule of upcoming seminars and webinars
- Vote in annual trustee elections
- Find links to TRS forms
- Create or view retirement benefit estimates
- Submit applications for retirement or health insurance

Direct Emails



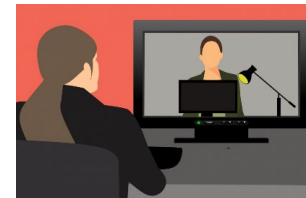
 Teachers' Retirement System of the State of Kentucky <donotreply@trs.ky.gov>
To

- Email from address of donotreply@trs.ky.gov
- Safe to open

TRS Response to Coronavirus

Reaching Out to Members

TRS must ensure legally mandated benefits are paid on time. To meet that duty and because TRS has a small staff that works closely together, the virus, especially new variants, remains a concern. This is why popular and easier methods for members used during the pandemic continue to be used now.



Video counseling



Retirements can be handled through Pathway



Webinars

TRS 4 Commences

Who Is In TRS 4?

**Applies only to new members
who enter on or after Jan. 1, 2022**

TRS Account Types

TRS has four account types delineated by entry date

TRS 1

Entry before
July 1, 2002

TRS 2

Entry on or
between
July 1, 2002, and
June 30, 2008

TRS 3

Entry on or
between
July 1, 2008, and
Dec. 31, 2021

TRS 4

Entry on or after
Jan. 1, 2022

Doing It Right

What That Means at TRS



Providing security for Kentucky's retired teachers using a long-term investing process proven and refined over decades, avoiding the whims of the day, to achieve top returns on investments at the lowest costs.





***Our Members
Come First!***

800-618-1687

**8 a.m. – 5 p.m. ET
Monday – Friday**

info@trs.ky.gov

<https://trs.ky.gov>

Protecting & Preserving Teachers' Retirement Benefits