

**MCHENRY COUNTY
TUBERCULOSIS CARE AND TREATMENT BOARD MEETING
2200 N. SEMINARY AVE. BUILDING A
WOODSTOCK, ILLINOIS 60098
November 28, 2017
8:00 AM**

AGENDA

1. Call to Order
2. Public Participation
3. Minutes from September 2017 meeting
4. Consent Agenda
 - A) Disbursements; September-October 2017
 - B) Income and Expense Report; September-October 2017
 - C) Metro Infectious Disease Contract (Renewal)
 - D) 2018 Meeting Schedule
5. Monthly Report
 - A) Introduction of new TB nurse- Amanda Kurka, BSN, RN
 - B) TB Nurse Report
 - C) Statistics
 - D) IDPH Report
6. Program Highlights
7. Old Business (For Discussion)
8. New Business (For Discussion)
9. Board Issues (For Discussion)
10. Information and Communication (For Discussion)

Cousins, Sophie. (2017, October 16). 3 innovations that could transform TB diagnosis and care. Retrieved from: <https://www.devex.com/news/3-innovations-that-could-transform-tb-diagnosis-and-care-91271>

11. Executive Session
12. Adjournment

MCHENRY COUNTY TUBERCULOSIS AND TREATMENT BOARD

MEETING MINUTES

SEPTEMBER 19, 2017

CALL TO ORDER:

Marylou Ludicky RN MPH called the meeting to order at 8:05am; TB Board Members present were: James Mowery M.D and Marylou Ludicky RN MPH; Staff present were: Michael Hill MPH, MPA, FACHE, CHES, Administrator, Susan Karras RN, BSN, MBA, Director of Nursing, Sara Boline MPH Communicable Disease Coordinator, and Karen Stephenson TB RN.

MINUTES:

James Mowery M.D made to motion to approve TB Board Minutes for May/June/July/and August 2017.

FINANCIAL STATUS:

Marylou Ludicky RN MPH reviewed the Disbursements as well as the Income and Expense Report for May/June/July/and August 2017. James Mowery M.D made motion to approve; second by Marylou Ludicky RN MPH.

MONTHLY REPORTS:

Karen Stephenson TB RN, reviewed TB Nurse Report for May/June/July/and August 2017.

Skin testing

- In May, 17 clinics were held with 34 clients tested
- In June, 17 clinics were held with 36 clients tested
- In July, 16 clinics were held with 46 clients tested
- In August, 18 clinics were held with 93 clients tested

Patient Update

No active cases

38 year old gentlemen on 12 week LTBI program getting weekly DOT doing well

Activities

Old Firehouse testing 5/9/17 and 5/23/17

Webinars/Trainings:

May webinars – TB and Tobacco

June – Help them (TB Patients) Quit Tobacco

July – TB and Tobacco TB assessment and Counseling Skills

June Training – TB for the Primary Provider- Rush-Copley Aurora

MINUTES AND CONSENT AGENDA

MCHEMRY COUNTY HEALTH DEPARTMENT
TB - DISBURSEMENTS
September-October 2017
SUMMARY

| PERSONAL SERVICES: | ACCT# | PAYROLL | | |
|---|-------|-----------|-------------------|------------------------------|
| Acevedo, Lola | 3010 | \$ | 5,700.00 | |
| Cazares, Maria | 3020 | \$ | 3,516.63 | |
| Appner, Amanda | 3010 | \$ | 1,970.26 | Start 10/2/17 |
| Schoen, Faith | 3010 | \$ | 8,172.00 | |
| Stephenson, Karen | 3010 | \$ | 5,248.87 | |
| JE217195-Reverse Payroll Accrual - 11/30/16 | 3010 | \$ | (7,658.00) | |
| JE217195-Reverse Payroll Accrual - 11/30/16 | 3020 | \$ | (687.00) | |
| JE217195-Reverse Payroll Accrual - 11/30/16 | 3025 | \$ | (1,510.00) | |
| | 3025 | | Included in above | |
| FICA | 3105 | \$ | 1,882.49 | |
| JE217199-Reverse Payroll Accrual - 11/30/16 | 3105 | \$ | (741.00) | |
| IMRF | 3110 | \$ | 2,534.63 | |
| JE217199-Reverse Payroll Accrual - 11/30/16 | 3110 | \$ | (1,009.00) | |
| INSURANCE | 3146 | \$ | 5,373.54 | July & Aug posted in Sept |
| Payroll subtotal | | \$ | 22,793.42 | |

| DESCRIPTION: | ACCT # | AMOUNT |
|-------------------------|-----------|-------------------------|
| Contractual Services | 4001 | \$ 5,000.00 |
| Assoc. Dues/Memberships | 4005 | |
| Training | 4006 | |
| Subscriptions | 4008 | |
| Printing | 4055 | |
| Telephone | 4096 | \$ 60.43 |
| Rent | 4101 | |
| Maint. Agreements | 4130 | \$ 16.15 |
| Maint Office Equipment | 4131 | |
| Medical | 4246 | \$ 2,240.00 |
| Special Consultants | 4435 | |
| Private Lab Services | 4442 | \$ 44.82 |
| Refuse disposal | 4449 | \$ 100.00 |
| Contingent | 4570 | |
| Office Supplies | 5010 | \$ 37.37 |
| Office Equipment | 5020 | |
| Postage | 5030 | |
| Mileage | 5040 | \$ 164.78 |
| Meeting Expenses | 5050 | \$ 188.86 |
| Supplies | 5070 | |
| Medical Supplies | 5080 | |
| Medication | 5085 | \$ 883.97 |
| Fuel, oil, grease | 5160 | \$ 15.00 |
| TOTAL EXPENSES | | |
| Expense Total | \$ | 8,751.38 |
| Grand Totals | \$ | <u>31,544.80</u> |

**MCHENRY COUNTY HEALTH DEPARTMENT
TB - DISBURSEMENTS
September 2017 (FY17)**

| <u>Personal Service</u> | <u>ACCT #</u> | <u>PAYROLL</u> | |
|-------------------------|----------------------|--------------------|------------------------------|
| Acevedo, Lola | 3010 | \$2,850.00 | |
| Cazares, Maria | 3020 | \$1,767.84 | |
| OPEN | 3010 | \$0.00 | |
| Schoen, Faith | 3010 | \$4,086.00 | |
| Stephenson, Karen | 3010 | \$2,624.29 | |
| | 3025 | Included in above | |
| FICA | 3105 | \$866.60 | |
| IMRF | 3110 | \$1,166.81 | |
| | | | |
| INSURANCE | 3146 | \$3,582.36 | July & Aug posted in Sept |
| | Payroll Total | \$16,943.90 | |

| <u>VD</u> | <u>VENDOR</u> | <u>ACCT #</u> | <u>AMOUNT</u> |
|-----------|-----------------------------|---------------|---------------|
| JE217661 | HE Admin Charge - Q3 | 4001 | \$5,000.00 |
| VD316037 | VERIZON WIRELESS | 4096 | \$32.74 |
| VC283665 | MERCY HEALTH SYSTEM CORP | 4246 | \$310.00 |
| VC284027 | ACL LABORATORIES | 4442 | \$14.94 |
| VC284107 | HEALTHCARE WASTE MANAGEMENT | 4449 | \$100.00 |
| VD316013 | WAREHOUSE DIRECT INC | 5010 | -\$39.36 |
| VD316126 | WAREHOUSE DIRECT INC | 5010 | \$76.73 |
| VD315920 | STEPHENSON KAREN | 5040 | \$53.50 |
| VD316071 | ACEVEDO LOLA | 5040 | \$17.12 |
| VD316071 | PEREZ ANGELICA | 5040 | \$29.96 |
| VD316301 | ACEVEDO LOLA | 5040 | \$34.24 |
| VD316128 | STEPHENSON KAREN | 5050 | \$96.05 |
| VD316128 | BOLINE SARA | 5050 | \$92.81 |
| VC283662 | BRANDT PHARMACY INC | 5085 | \$150.79 |
| VC283661 | BRANDT PHARMACY INC | 5085 | \$70.16 |
| VC283660 | BRANDT PHARMACY INC | 5085 | \$77.18 |
| VC284026 | BRANDT PHARMACY INC | 5085 | \$70.16 |
| VC284108 | BRANDT PHARMACY INC | 5085 | \$77.18 |
| VD316128 | BOLINE SARA | 5160 | \$15.00 |

Total Expense \$6,279.20

| | |
|--------------------|--------------------|
| Grand Total | \$23,223.10 |
|--------------------|--------------------|

**MCHENRY COUNTY HEALTH DEPARTMENT
TB - DISBURSEMENTS
October 2017 (FY17)**

| | <u>Personal Service</u> | <u>ACCT #</u> | <u>PAYROLL</u> |
|----------|------------------------------------|-------------------|-------------------|
| | Acevedo, Lola | 3010 | \$2,850.00 |
| | Cazares, Maria | 3020 | \$1,748.79 |
| | Appner, Amanda | 3010 | \$1,970.26 |
| | Schoen, Faith | 3010 | \$4,086.00 |
| | Stephenson, Karen | 3010 | \$2,624.58 |
| JE217195 | Reverse Payroll Accrual - 11/30/16 | 3010 | -\$7,658.00 |
| JE217195 | Reverse Payroll Accrual - 11/30/16 | 3020 | -\$687.00 |
| JE217195 | Reverse Payroll Accrual - 11/30/16 | 3025 | -\$1,510.00 |
| | | 3025 | Included in above |
| | FICA | 3105 | \$1,015.89 |
| JE217199 | Reverse Payroll Accrual - 11/30/16 | 3105 | -\$741.00 |
| | | Total 3105 | \$274.89 |
| | IMRF | 3110 | \$1,367.82 |
| JE217199 | Reverse Payroll Accrual - 11/30/16 | 3110 | -\$1,009.00 |
| | | Total 3110 | \$358.82 |

| | | |
|-----------|------|------------|
| INSURANCE | 3146 | \$1,791.18 |
|-----------|------|------------|

| | |
|---------------|-------------------|
| Payroll Total | \$5,849.52 |
|---------------|-------------------|

| <u>VD</u> | <u>VENDOR</u> | <u>ACCT #</u> | <u>AMOUNT</u> |
|-----------|--------------------------------------|---------------|---------------|
| VD316578 | VERIZON WIRELESS | 4096 | \$27.69 |
| VD316603 | ANSERCALL 24 LLC | 4130 | \$16.15 |
| VC284370 | MERCY HEALTH SYSTEM CORP OMI | 4246 | \$372.00 |
| VC284504 | METRO INFECTIOUS DISEASE CONSULTANTS | 4246 | \$500.00 |
| VC284503 | METRO INFECTIOUS DISEASE CONSULTANTS | 4246 | \$500.00 |
| VC285134 | MERCY HEALTH SYSTEM CORP OMI | 4246 | \$558.00 |
| VC284927 | ACL LABORATORIES | 4442 | \$29.88 |
| VD316415 | PEREZ ANGELICA | 5040 | \$29.96 |
| VC284372 | BRANDT PHARMACY INC | 5085 | \$70.16 |
| VC284371 | BRANDT PHARMACY INC | 5085 | \$87.70 |
| VC284502 | BRANDT PHARMACY INC | 5085 | \$70.16 |
| VC284925 | BRANDT PHARMACY INC | 5085 | \$70.16 |
| VC284924 | BRANDT PHARMACY INC | 5085 | \$17.54 |
| VC285039 | BRANDT PHARMACY INC | 5085 | \$87.70 |
| VC285153 | BRANDT PHARMACY INC | 5085 | \$35.08 |

| | |
|---------------|------------|
| Expense Total | \$2,472.18 |
|---------------|------------|

| | |
|--------------------|-------------------|
| Grand Total | \$8,321.70 |
|--------------------|-------------------|

TUBERCULOSIS CARE AND TREATMENT FY2017

| | DEC | JAN | FEB | MARCH | APRIL | MAY | JUNE | JULY | AUG | SEPT | OCT | NOV | TOTAL | ASST | BALANCE | % |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|---------------|--------------|----------------|--------------|------------|--------------|---------------|---------------|---------|
| 7010 PROPERTY TAXES | | | | | | | | | | | | | | \$ 250,000.00 | \$ 3,003.99 | 98.8% |
| 7010 PROPERTY TAXES | \$560.00 | \$230.00 | \$310.00 | \$250.00 | \$460.00 | \$480.00 | \$452.20 | \$540.00 | \$540.00 | \$430.00 | \$250.00 | \$250.00 | \$3,975.20 | \$ 19,000.00 | \$ 15,024.80 | 20.9% |
| 9405 | | | | | | | | | | | | | \$0.00 | \$ | \$ (120.00) | #DIV/0! |
| 9417 | | | | | | | | | | | | | \$120.00 | \$ | \$ | 0.0% |
| 9510 UNTERST. INCOME | \$204.50 | \$256.49 | \$201.71 | \$253.49 | \$266.88 | \$260.03 | \$275.88 | \$405.18 | \$320.86 | \$439.90 | \$460.35 | \$511.00 | \$3,451.17 | \$ 600.00 | \$ (2,857.17) | 576.2% |
| 9511 THE TAX DIRT DIRT | | | | | | | | | | | | | \$0.00 | \$ 25.00 | \$ 25.00 | 0.0% |
| 9990 | | | | | | | | | | | | | \$0.00 | \$ 106,451.00 | \$ 106,451.00 | 0.0% |
| TOTAL REVENUE | \$564.50 | \$486.49 | \$513.71 | \$487.49 | \$726.88 | \$744.03 | \$1,112.24 | \$3,552.64 | \$6,781.80 | \$1,079,999.47 | \$4,110.65 | \$0.00 | \$254,548.44 | \$ 376,076.00 | \$ 121,527.56 | 67.7% |
| 3010 DEPUTY CLERK SALARIES | \$17,745.79 | \$9,456.28 | \$13,726.11 | \$13,039.81 | \$12,728.07 | \$13,716.59 | \$19,769.84 | \$11,155.94 | \$9,560.30 | \$9,082.26 | \$3,197.78 | \$1,197.78 | \$133,455.77 | \$ 166,215.00 | \$33,039.23 | 80.1% |
| 3020 DEPUTY CLERK SALARY | \$2,449.99 | \$1,473.71 | \$1,720.22 | \$1,680.21 | \$1,680.21 | \$2,560.22 | \$1,680.21 | \$1,767.84 | \$1,680.21 | \$1,680.21 | \$974.16 | \$974.16 | \$19,291.10 | \$ 20,665.00 | \$ 1,373.90 | 93.8% |
| 3025 Fellow | \$1,510.22 | \$1,299.64 | \$1,299.64 | \$773.94 | \$905.17 | \$93.32 | \$306.94 | \$1,186.52 | \$665.66 | \$565.66 | \$747.31 | \$747.31 | \$7,124.10 | \$ 9,336.00 | \$2,711.90 | 72.4% |
| 3040 Overtime | | | \$270.76 | | | | | | | | | | \$270.76 | \$ | \$ (270.76) | #DIV/0! |
| 3105 SOC SEC/CTY STAGE | \$1,660.50 | \$982.23 | \$1,847.70 | \$1,185.28 | \$1,192.19 | \$1,185.28 | \$1,777.63 | \$1,072.51 | \$866.60 | \$866.60 | \$274.89 | \$274.89 | \$12,248.41 | \$ 15,350.00 | \$3,101.59 | 79.8% |
| 3110 FULL MONTH RET FOND | \$2,222.68 | \$1,222.48 | \$1,222.48 | \$1,222.48 | \$1,222.48 | \$1,222.48 | \$1,222.48 | \$1,222.48 | \$1,222.48 | \$1,222.48 | \$1,222.48 | \$1,222.48 | \$12,222.48 | \$ 20,667.00 | \$4,199.89 | 79.7% |
| 3140 EMPLOYEE HEALTH | \$2,647.18 | \$2,647.18 | \$1,291.18 | \$1,291.18 | \$1,291.18 | \$5,373.54 | \$1,791.18 | \$1,791.18 | \$1,791.18 | \$1,791.18 | \$1,791.18 | \$1,791.18 | \$16,976.62 | \$ 23,222.00 | \$ 16,245.38 | 51.1% |
| PERSONNEL SUPPTOTAL: | \$25,809.18 | \$17,291.52 | \$20,857.21 | \$18,275.12 | \$18,381.59 | \$23,646.63 | \$29,199.24 | \$18,257.40 | \$12,061.55 | \$16,043.90 | \$4,058.24 | \$0.00 | \$205,633.87 | \$ 269,889.00 | \$64,255.13 | 76.2% |
| 4001 Continual Services | | | \$199.00 | \$5,000.00 | | | \$5,000.00 | \$190.00 | | | | | \$5,199.00 | \$ 25,000.00 | \$9,801.00 | 60.8% |
| 4005 ASSOC DUES/STAFF | | | | | | | | | | | | | \$130.00 | \$ 350.00 | \$220.00 | 37.1% |
| 4006 TRAINING | | | | | | | | | | | | | \$0.00 | \$ 1,000.00 | \$1,000.00 | 0.0% |
| 4008 INSCRIPTIONS | | | | | | | | | | | | | \$0.00 | \$ | \$ | 0.0% |
| 4055 PRINTING | | | | | | | | | | | | | \$0.00 | \$ 400.00 | \$400.00 | 0.0% |
| 4096 TELEPHONE | \$28.30 | \$27.29 | \$27.29 | \$28.45 | \$28.53 | \$28.05 | \$27.83 | \$28.85 | \$20.35 | \$22.74 | \$27.69 | \$27.69 | \$296.08 | \$ 1,800.00 | \$1,503.92 | 16.4% |
| 4104 AGENT | | | \$25.29 | | \$1,247.75 | \$18.19 | | \$19.52 | | | \$16.15 | | \$1,226.90 | \$ 362.00 | \$ (864.90) | 253.9% |
| 4126 MAINTENANCE ASSESSMENT | | | | | \$28.35 | | | | | | | | \$28.35 | \$ 500.00 | \$471.65 | 7.7% |
| 4131 MAINTENANCE OFFICE EQUIP | | | \$372.00 | \$1,120.00 | \$496.00 | \$1,686.00 | \$650.00 | \$124.00 | \$1,000.00 | \$310.00 | \$1,930.00 | | \$7,658.00 | \$ 35,000.00 | \$27,342.00 | 21.9% |
| 4240 MEDICAL | | | | | \$14.94 | \$14.94 | \$9.96 | \$34.86 | \$9.96 | \$14.94 | \$29.88 | | \$169.32 | \$ 2,500.00 | \$2,330.68 | 6.8% |
| 4440 LABS | | | | | \$30.00 | \$30.00 | \$30.00 | \$30.00 | \$30.00 | \$30.00 | \$30.00 | | \$30.00 | \$ 850.00 | \$560.00 | 23.5% |
| 4490 OVERHEAD DEDUCTION | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | #DIV/0! |
| 4570 Contingent Fee Expense | \$0.00 | \$29.20 | \$629.52 | \$6,253.67 | \$1,885.24 | \$1,742.20 | \$5,732.69 | \$319.33 | \$1,059.22 | \$5,457.68 | \$2,003.72 | \$0.00 | \$25,117.58 | \$ 67,965.00 | \$42,844.42 | 37.0% |
| CONTRACTUAL SUPPTOTAL: | | | | | | | | | | | | | \$327.94 | \$ 1,700.00 | \$1,372.06 | 19.3% |
| 5010 OFFICE SUPPLIES | | | | | | | | | | | | | \$0.00 | \$ 1,500.00 | \$1,500.00 | 0.0% |
| 5020 OFFICE EQUIPMENT | | | | | | | | | | | | | \$0.00 | \$ 1,000.00 | \$78.73 | 21.3% |
| 5030 Books | | | \$21.27 | | | | | | | | | | \$21.27 | \$ 1,000.00 | \$804.20 | 23.9% |
| 5040 MEDICAL | | | \$154.44 | \$100.58 | \$59.92 | \$29.96 | \$81.32 | \$172.27 | \$66.34 | \$134.82 | \$29.96 | | \$954.80 | \$ 4,000.00 | \$3,045.20 | 23.9% |
| 5090 MEETING EXPENSE | | | | | | | | | | | | | \$188.86 | \$ 1,000.00 | \$811.14 | 18.9% |
| 5096 SUPPLIES | | | | | | | | | | | | | \$0.00 | \$ 2,000.00 | \$2,000.00 | 0.0% |
| 5098 MEDICAL SUPPLIES | | | | | \$0.16 | \$0.16 | | | | | | | \$447.04 | \$ 5,000.00 | \$4,552.96 | 8.9% |
| 5098 MEDICAL | | | | | \$172.40 | \$556.67 | \$564.68 | \$825.80 | \$192.94 | \$445.47 | \$428.50 | | \$4,431.33 | \$ 20,425.00 | \$15,993.67 | 21.7% |
| 5115 Computer components under \$5K | | | | | | | | | | | | | \$0.00 | \$ 500.00 | \$500.00 | 0.0% |
| 5125 Computer Software under \$5K | | | | | | | | | | | | | \$0.00 | \$ 2,000.00 | \$2,000.00 | 0.0% |
| 5160 Vehicle | | | | | | | | | | | | | \$15.00 | \$ | \$ (15.00) | #DIV/0! |
| 5210 REPLICATIONS | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | 0.0% |
| 5099 PRETTY CAR | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | 0.0% |
| COMMUNITIES SUPPTOTAL: | \$0.00 | \$467.17 | \$729.71 | \$621.20 | \$205.52 | \$764.35 | \$446.00 | \$1,101.81 | \$881.82 | \$871.52 | \$468.46 | \$0.00 | \$6,586.56 | \$ 38,225.00 | \$31,638.44 | 16.7% |
| TOTAL EXPENSES | \$25,599.18 | \$18,506.99 | \$20,975.54 | \$25,149.99 | \$20,469.34 | \$26,147.18 | \$35,578.03 | \$19,665.54 | \$15,580.60 | \$23,223.10 | \$6,550.52 | \$0.00 | \$237,138.01 | \$ 376,076.00 | \$138,937.99 | 61.1% |
| NET INCOME | (\$25,024.68) | (\$18,050.50) | (\$20,461.83) | (\$24,662.50) | (\$19,742.46) | (\$8,707.03) | \$76,246.68 | (\$16,112.90) | (\$8,450.80) | \$84,766.37 | (\$2,449.87) | \$0.00 | \$17,410.43 | \$ | \$ | |
| BANK BALANCE: | \$436,688.81 | \$417,910.31 | \$397,448.48 | \$373,990.38 | \$352,882.22 | \$337,945.93 | \$421,624.39 | \$404,450.22 | \$396,224.92 | \$480,740.03 | \$467,374.00 | | | | | |

find balance

61.1%

BOH CONTRACT SUMMARY

- New Contract
 Renewal
 Amended Renewal

| | | |
|---|--|--------------------|
| NAME OF ORGANIZATION | McHenry County Tuberculosis Care and Treatment Board Consultant Agreement with Dr. Russell Petrak of Metro Infectious Disease | |
| EFFECTIVE DATES OF CONTRACT | 1/1/18 – 12/31/18 | |
| BRIEF DESCRIPTION OF CONTRACT PURPOSE | Retain an infectious disease medical doctor to provide TB medical services for the care, treatment and prevention of tuberculosis in McHenry County. | |
| MCDH DEPT/STAFF INVOLVED | Nursing Division and Communicable Disease | |
| FINANCIAL TERMS | 2018 \$250/hour | 2017 \$250/hour |
| INDEMNIFICATION CLAUSE? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| SPECIAL ARRANGEMENTS, REQUIREMENTS, CONDITIONS | <ul style="list-style-type: none"> Review policies and procedures regarding TB care and treatment services. Provide clinical services as an Infectious Disease Specialist in the provision of TB care and treatment. Provide consultation on matters pertaining to TB care and treatment. Consultant shall be available at such times as may be reasonably agreed between Consultant and the McHenry County Tuberculosis Care and Treatment Board. | |

INDEPENDENT CONTRACTOR AGREEMENT

This Independent Contractor Agreement (the "Agreement") is made and entered into this 1st day of January, 2018, by and between the McHenry County Tuberculosis Care and Treatment Board, having its principal place of business at the McHenry County Government Center, a body politic, located at 2200 North Seminary Avenue, Woodstock, Illinois 60098 ("Department") and Metro Infectious Disease Consultants, LLC, with his/her principal place of business located at 901 McClintock Drive, Suite 206, Burr Ridge, IL 60527 ("Contractor") and sets forth the terms and conditions under which Contractor agrees to perform certain services as set forth below.

1. Scope of Work. Contractor shall be responsible for performing such services as the parties shall from time to time agree (the "Services"). The specific services to be rendered from time to time shall be set forth in a separate service order (a "Service Order") and each Service Order shall be in the form set forth in Exhibit "A", attached hereto and incorporated herein. The terms and conditions of this Agreement shall apply to each Service Order; provided, however, in the event of any conflict between the provisions of this Agreement and the provisions of a Service Order, the provisions of the Service Order shall take precedence.
2. Term and Termination. This Agreement shall be effective and binding from the date of its execution for an initial term ending on December 31, 2018 unless terminated earlier pursuant to the terms hereof. Department may terminate this Agreement upon thirty (30) days prior written notice to Contractor. In the event of such termination, Department shall be liable only for payment in accordance with the fee provisions of this Agreement for Services rendered prior to the effective date of the termination. Termination of this Agreement shall not be deemed to affect Contractor's obligations with respect to Paragraphs 6, 7 and 8.
3. Fees. Department shall pay fees to Contractor for Contractor's performance of Services hereunder as set forth in the applicable Service Order. Contractor shall submit an itemized invoice for the Services performed with sufficient detail to allow Department to review and confirm the Services performed and the number of hours expended by Contractor. The Department shall pay to Contractor the amount agreed upon no later than 30 days from receiving such invoice. Contractor shall not incur any expenses or costs on behalf of the Department or in performing the Services unless the Department specifically authorizes in advance such expenses or costs in writing.
4. Relationship of the Parties. In performing Services hereunder, Contractor shall at all times act as an independent contractor and not as an agent or employee of County of McHenry (County) or of the Department. The Services shall be completed to the satisfaction of Department; however the actual details of the Services shall be under Contractor's control. Contractor is required to make appropriate filings with the taxing authorities to account for and make all payments required by local, state and federal authorities, including without limitation, income tax and social security payments. Contractor shall also comply, at his/her expense, with all applicable provisions of workers compensation laws, unemployment compensation laws, social security laws, the Fair Labor Standards Act and all other applicable federal, state and local regulations relating to the terms and conditions of employment required to be fulfilled by an employer. Contractor further agrees to indemnify and hold County and the Department harmless for any and all claims made by the above mentioned authorities resulting from performance of Services by Contractor hereunder or otherwise arising out of Contractor's breach of the obligations contained in this paragraph.
5. Ownership of Work Product. Contractor agrees that all work product produced by Contractor hereunder, including, without limitation, all reports and other documents ("Work Product") shall be deemed to be works made for hire under U.S. copyright laws and that all right, title, and interest in and to the Work Product shall be the sole property of Department and Department shall have the exclusive right to the copyrights on the Work Product. To the extent that the Work Product is not deemed to satisfy the requirements for a work made for hire under U.S. copyright laws, Contractor hereby assigns to Department all copyrights to the Work Product and agrees to execute any additional documents requested by Department to further such assignment at no additional cost to Department. Contractor warrants that the

representations, statements, or agreements other than those herein expressed. No agreement hereafter made between the parties shall be binding on either party unless reduced in writing and signed by the party sought to be bound thereby.

11. Governing Law and Venue. The parties agree this Agreement has been executed and delivered in Illinois and that their relationship and any and all disputes, controversies or claims arising under this Agreement shall be governed by the laws of the State of Illinois, without regard to conflicts of laws principles. The parties further agree that the exclusive venue for all such disputes shall be the Circuit Court of the 22nd Judicial Circuit of McHenry County, Illinois, and the parties hereby consent to the personal jurisdiction thereof.
12. Compliance with Laws. Each party hereto covenants and agrees to comply with all applicable federal, state, and local laws, codes, ordinances, rules and regulations.
13. Non-Appropriation of Funds. This Agreement is made subject to available budgetary appropriations and shall not create any obligation on behalf of the County or Department in excess of such appropriations. In the event that no funds or insufficient funds are appropriated and budgeted, this Agreement shall terminate without penalty or expense to the County or Department thirty (30) days after written notification of termination from the Department.
14. Assignment and Subcontracting. This Agreement shall not be assigned by Contractor without prior written approval of the Department, subject to such conditions and provisions as the Department may deem necessary in its sole and absolute discretion. No such approval by the Department of any assignment shall be deemed in any event or in any manner to provide for the incurrence of any obligation of the Department in addition to the total agreed upon price. Approval by the Department of an assignment shall not be deemed a waiver of any right accrued or accruing against Contractor. No assignee of Contractor shall assign this Agreement without prior written approval of the Department. This Agreement shall be binding upon the parties and their respective heirs, successors, and assigns. Furthermore, Contractor shall not enter into any subcontract with any agency or individual with respect to the performance of Services under this Agreement without the written consent of the Department. Such consent Department may grant, condition or withhold in Department's sole discretion.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first set forth above.

**McHenry County Tuberculosis Care
and Treatment Board**

Contractor

By: _____
Michael Hill
Public Health Administrator
as authorized Agent for the
McHenry County Tuberculosis Care
and Treatment Board

By: _____
Russell Petrak MD
Metro Infectious Disease Consultants, LLC

Date: _____

Date: _____

Acceptance of the terms of this Service Order is acknowledged by the following signatures of the Authorized Representatives.

McHenry County Tuberculosis Care and Treatment Board

Contractor

By: _____
Michael Hill
Public Health Administrator
as authorized Agent for the
McHenry County Tuberculosis Care
and Treatment Board

By: _____
Russell Petrak MD
Metro Infectious Disease Consultants, LLC

Date: _____

Date: _____



McHENRY COUNTY DEPARTMENT OF HEALTH

McHenry County TB Board

Mary Lou Ludicky, RN, MPH
President
James Mowery, M.D.
Vice President
Rebecca Rockwood, MT (ASCP)
Secretary
Irfan Hafiz, M.D.
Medical Director

Tuberculosis Care and Treatment Program
2200 N. Seminary Avenue, Annex B
Woodstock, Illinois 60098
(815) 334-4500
Fax (815) 815-0191

2018 TB Board Meeting Schedule

All meetings will be at 8:00am in Building A Large Conference Room of the MCDH on the following dates:

January 16, 2018

March 20, 2018

May 15, 2018

July 17, 2018

September 18, 2018

November 20, 2018

MONTHLY REPORT

MCDH TB Nurse Report

September/ October

Skin Testing

- In September 16 clinics were held with 45 clients tested
- In October 17 clinics were held with 63 clients tested

Doctor Clinic

- On September 18th, Doctors clinic was held with 7 chest x-rays and 14 charts reviewed.
- On October 16th, Doctors clinic was held with 11 chest x-rays and 19 charts reviewed.

Patient Update

All 9 contacts of our XDR patient had their final evaluations and were discharged

38 Y/O gentleman on 12 week LTBI program was discharged

Activities

PADS TB testing 10/17/17 at the day center and 10/23 at evening church sites

Webinars/Trainings:

| | |
|-------------|---|
| 10/16//2017 | Prednisone Attenuates IRIS in TB-HIV |
| 10/17/2017 | Point of care Assay Zeros in on Drug-Resistant TB Mutations |
| 10/24/2017 | TB Vaccines Where are We & What Needs to be Done |
| 10/25/2017 | What's the Plus in Quantiferon |

Up-coming events

Outreach Old Firehouse Assistance Center TB testing- November 6th

PADS Day and Evening site testing- November

TUBERCULOSIS PROGRAM MONTHLY REPORT FY 2017

EDUCATION

| TB STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-----|--------|--------|
| PRESENTATIONS | | | | | | | | | | | | | | |
| # of Presentations | | | | | | | | | | | | | | 3 |
| # of Attendees | | | | | | | | | | | | | | 185 |
| 1:1 EDUCATION (PUBLIC & HCPs) (HOURS) | | | | | | | | | | | | | | |
| Phone contacts | 6.16 | 6.84 | 7.92 | 8.67 | 7.5 | 9.91 | 6.25 | 3.92 | 5.08 | 5.17 | 7 | | 74.42 | 83.26 |
| Face to Face contacts (@MCDH) | 10.09 | 19.92 | 13.83 | 15.25 | 15.25 | 13.83 | 15.92 | 15.42 | 25.33 | 11.75 | 31 | | 187.59 | 191.1 |
| Case Mangement | 5.25 | 7.09 | 10.75 | 4.75 | 8.17 | 7.75 | 7.67 | 5.75 | 6.5 | 7 | 6.58 | | 70.68 | 98.74 |
| TB Board Meeting Prep | | 2 | | 2 | | 2 | | | | | 2 | | 8 | 4.25 |

TESTING

| TB SKIN TEST STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|------------|------------|
| MCDH (Annex B) | | | | | | | | | | | | | | |
| # of Clinics | 18 | 16 | 16 | 18 | 15 | 17 | 17 | 16 | 18 | 16 | 17 | | 184 | 183 |
| # of IGRAs | | | | | | | | | | | | | | |
| # of skin tests | 53 | 87 | 46 | 58 | 52 | 34 | 36 | 46 | 93 | 45 | 63 | | 613 | 672 |
| Outreach Testing | | | | | | | | | | | | | | |
| PADS / Old Firehouse | | | | | | | | | | | | | | |
| RN time | 5.5 | 4.5 | 6.5 | 5.5 | 7 | 7 | | 2.5 | | | 4 | | 42.5 | 40.5 |
| # of site visits | 2 | 2 | 3 | 2 | 2 | 2 | | 2 | | | 4 | | 19 | 15 |
| # of skin tests | 6 | 5 | 3 | 3 | 2 | 6 | | 9 | | | 20 | | 54 | 27 |
| Contact Investigation Testing | | | | | | | | | | | | | | |
| RN time | | | | | | | | | | | | | | |
| # of site visits | | | | | | | | | | | | | | |
| # of skin tests | | | | | | | | | | | | | | |
| Total Skin Tests | 59 | 92 | 49 | 61 | 54 | 40 | 36 | 55 | 93 | 45 | 83 | | 667 | 722 |

| POSITIVE SKIN TEST STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----|--------------|-------------|
| Positive skin tests/Outside agency | 4 | 2 | | 1 | 6 | 1 | 6 | 1 | 1 | 1 | 2 | | 25 | 23 |
| Positive skin tests /MCDH clinics | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | 2 | 1 | | 10 | 5 |
| Positive skin tests/PADS | | | | | | | | | | | | | | |
| Positive skin tests /Outreach Sites | | | | | | | | | | | | | | |
| Positive skin tests/Contacts | | | | | | | | | | | | | | |
| Total | 5 | 3 | 1 | 2 | 6 | 2 | 6 | 2 | 2 | 3 | 3 | | 35 | 28 |
| County Positive Skin Test Rate^ | 1.63 | 0.98 | 0.33 | 0.65 | 1.95 | 0.65 | 1.95 | 0.65 | 0.65 | 0.98 | 0.98 | | 11.39 | 9.11 |

| DIAGNOSTIC STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| X-Rays Ordered | 7 | 4 | 9 | 7 | 5 | 5 | 6 | 6 | 4 | 5 | 5 | | 63 | 56 |
| Sputum Collected | | 9 | 9 | | | 6 | 6 | | 6 | 3 | 3 | | 42 | 9 |
| Laboratory Tests Ordered | 4 | 1 | 3 | 10 | 2 | 4 | 1 | 2 | 6 | 5 | 3 | | 41 | 15 |

MD CLINIC (HOURS)

| MD CLINIC (HOURS) | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|-----------------------------------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|-----|--------------|--------------|
| Pre Clinic RN Prep Time | | 2.83 | 2.5 | 1 | 1 | 5.58 | 1 | 2.75 | 2.75 | 4.33 | 4 | | 27.74 | 34.6 |
| Pre Clinic Clerical Prep Time | | 14.25 | 16.75 | 3.5 | 2.5 | 2.75 | 3.5 | 1.5 | 1.25 | 16.5 | 13.25 | | 75.75 | 167 |
| Total Pre Clinic Prep Time | | 17.08 | 19.25 | 4.5 | 3.5 | 8.33 | 4.5 | 4.25 | 4 | 20.83 | 17.25 | | 103.5 | 201.6 |
| Total Clinic Time | | 2 | | 2 | 3.25 | 2.17 | 1 | 1 | 1 | 2 | 3 | | 17.42 | 24.08 |
| Post Clinic RN Time | | 3 | | 2.5 | 2.33 | 1.5 | 2 | 2.5 | 1 | 2.83 | 2.5 | | 20.16 | 27.08 |
| Post Clinic Clerical Time | | 18.75 | | 13.25 | 11.5 | 9.25 | 10.25 | 8.75 | 4.5 | 7.5 | 6.75 | | 90.5 | 155.9 |
| Total Post Clinic Contact | | 21.75 | | 15.75 | 13.83 | 10.75 | 12.25 | 11.25 | 5.5 | 10.33 | 9.25 | | 110.7 | 183 |
| Total | | 40.83 | 19.25 | 22.25 | 20.58 | 21.25 | 17.75 | 16.5 | 10.5 | 33.16 | 29.5 | | 231.6 | 408.7 |

LTBI

| PREVENTIVE STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| Positive clients transferred into county | | | | | | | | | | | | | | |
| Positive Interviews | 7 | 4 | 6 | 7 | 5 | 5 | 6 | 2 | 2 | 2 | 5 | | 51 | 65 |
| Clients Starting LTBI | 3 | 1 | 3 | 10 | 1 | 2 | 2 | 1 | 2 | 3 | 2 | | 30 | 23 |

^aRate is per 100,000 using the 2015 estimated census population of 307,367 from the US Census Bureau

| CLIENTS STARTING LTBI | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| GENDER | | | | | | | | | | | | | | |
| Male | 1 | 1 | 1 | 4 | | 1 | 1 | 1 | 1 | 1 | | | 12 | 5 |
| Female | 2 | | 2 | 6 | 1 | 1 | 1 | | 1 | 2 | 2 | | 18 | 18 |
| AGE | | | | | | | | | | | | | | |
| Children (0-18 years) | 1 | | | 3 | | | | | 1 | | | | 5 | 2 |
| Adult (19-64 years) | 2 | 1 | 2 | 6 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | | 21 | 20 |
| Senior Adult (65+ years) | | | 1 | 1 | | 1 | 1 | | | | | | 4 | 1 |
| FOREIGN BORN | | | | | | | | | | | | | | |
| Yes | 3 | | 3 | 9 | 1 | 2 | 2 | | | 2 | 1 | | 23 | 14 |
| No | | 1 | | 1 | | | | 1 | | 1 | 1 | | 5 | 9 |

| TREATMENT COMPLETION | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| Clients Completing LTBI | 1 | 1 | 4 | | | | | 2 | | | 1 | | 9 | 7 |
| Failure to Complete | | 2 | | | | 1 | 3 | | | 3 | 1 | | 10 | 21 |
| Moved | | 1 | | | | | | | | 1 | | | 2 | 3 |
| Lost to F/U | | | | | | | 3 | | | | 1 | | 4 | 16 |
| Declined- Personal | | | | | | 1 | | | | 2 | | | 3 | |
| Declined-Medical | | 1 | | | | | | | | | | | 1 | 2 |
| Deceased | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | |

ACTIVE TB

| ACTIVE TB STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| # Active TB Cases Identified | | | | | | | | | | | | | | 1 |
| County Active TB rate [^] | | | | | | | | | | | | | | 0.325 |
| Active Cases Transferred OUT of McHenry County | | | | | | | | | | | | | | 1 |
| Active Cases Transferred INTO McHenry County | | | | | | | | | | | | | | 2 |
| Total Active TB Caseload* | 1 | 1 | | | | | | | | | | | 1 | 2 |
| DOT Visits | 21 | 14 | | | | | | | | | | | 35 | 180 |
| DOT Visit/Travel Time (Hours) | 10.5 | 6.5 | | | | | | | | | | | 17 | 124 |
| # TB Contact Investigations Initiated | | | | | | | | | | | | | | |
| # Suspects Investigated | | | | | | | | | | | | | | |

*Number does not accumulate, it reflects the number of people for whom the DOT visits and DOT time account for

| TREATMENT COMPLETION | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| Cases Completing Active TB Medication | | 1 | | | | | | | | | | | 1 | |
| Failure to Complete | | | | | | | | | | | | | | |
| Moved | | | | | | | | | | | | | | |
| Lost to F/U | | | | | | | | | | | | | | |
| Declined- Personal | | | | | | | | | | | | | | |
| Declined-Medical | | | | | | | | | | | | | | |
| Deceased | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | |

| RESISTANCE CLASSIFICATIONS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| #MDR Cases Identified | | | | | | | | | | | | | | |
| #XDR Cases Identified | | | | | | | | | | | | | | |

| ACTIVE TB STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| LOCATION OF ACTIVE TB IDENTIFIED | | | | | | | | | | | | | | |
| Pulmonary | | | | | | | | | | | | | | |
| Extrapulmonary | | | | | | | | | | | | | | 1 |
| GENDER | | | | | | | | | | | | | | |
| Male | | | | | | | | | | | | | | 1 |
| Female | | | | | | | | | | | | | | |
| AGE | | | | | | | | | | | | | | |
| Children (0-18 years) | | | | | | | | | | | | | | |
| Adult (19-64 years) | | | | | | | | | | | | | | 1 |
| Senior Adult (65+ years) | | | | | | | | | | | | | | |
| FOREIGN BORN | | | | | | | | | | | | | | |
| Yes | | | | | | | | | | | | | | 1 |
| No | | | | | | | | | | | | | | |

[^]Rate is per 100,000 using the 2015 estimated census population of 307,357 from the US Census Bureau

IDPH TB report

Presented at last NIPHC meeting 10/18/2017 from Elaine Darnall

I. Numbers of Cases

There have been 245 cases of active TB reported and confirmed as of Monday, Oct 16. Compared to the same week last year, there were 252 cases. We have 7 less cases than the number reported this week last year.

| <u>2017 to date</u> | |
|---------------------|----|
| DuPage County | 27 |
| Kane County | 14 |
| Kendall | 3 |
| Lake County | 9 |
| McHenry | 0 |
| Will County | 6 |
| Winnebago | 1 |
| Suburban Cook | 62 |
| Chicago | 98 |

II. Drug Resistance

Of the 245 cases reported thus far, 192 were culture positive. 155 (80.7%) had drug susceptibilities completed with 20 showing single drug resistance.

INH resistance: 12
PZA resistance: 7
Streptomycin resistance: 1

III. Dead at Diagnosis or Died on Therapy

Of the 245 cases reported thus far, 27 cases were either dead at dx, or died during therapy.

IV. Regional TB Meetings

- A. Northern Illinois- Nov 16 at DuPage County HD
- B. Southern Illinois- Nov 29 at John A Logan, Carterville
- C. Central Illinois- Dec 6 at McLean County HD, Bloomington

PROGRAM HIGHLIGHTS

OLD BUSINESS

NEW BUSINESS

BOARD ISSUES

INFORMATION

3 innovations that could transform TB diagnosis and care

 www.devex.com/news/91271

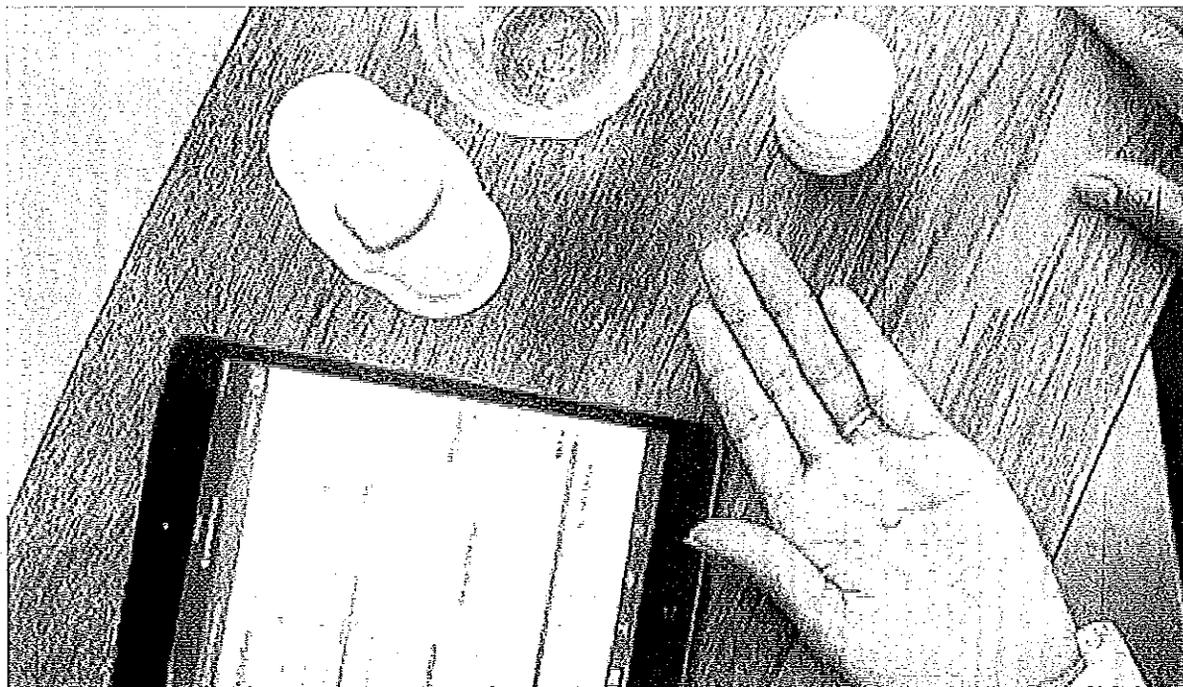
By Sophie Cousins

- Inside Development

Tuberculosis

By Sophie Cousins 16 October 2017

0



Proteus Discover, a wirelessly observed therapy device comprised of ingestible sensors, a small wearable sensor patch, an application on a mobile device, and a provider portal. Photo by: Proteus Digital Health

GUADALAJARA, Mexico — Ending global tuberculosis will require new diagnostic tools, new ways to support adherence to treatment, new drug regimens, and a vaccine, experts told Devex at the 48th Union World Conference on Lung Health.

The WHO End TB Strategy aims to reduce TB deaths by 95 percent and cut new cases by 90 percent between 2015 and 2035. Some 10.4 million people became infected with TB in 2015, and 1.8 million died, according to the World Health Organization's 2016 Global Tuberculosis report.

"If we don't have new tools, then forget it," Dr. Paula Fujiwara, scientific director of the International Union Against Tuberculosis and Lung Disease, told Devex. "We need new diagnostics, new regimens that work together and a vaccine. To me, if we don't have these things, then forget it."

Experts including those gathered in Guadalajara this week are working tirelessly to develop new tools that can transform the TB landscape, including technologies that target diagnosis, treatment, and delivery.

Devex spoke with three TB researchers who presented new findings that they hope will transform efforts to combat

the epidemic.

DOT vs WOT

Read more related stories:

- ▶ India rolls out new TB diagnosis aimed at catching child cases
- ▶ Ukraine's fight against TB is at risk from USAID cuts
- ▶ Stop TB chief warns of unspent Global Fund grants
- ▶ Overcoming challenges to a TB epidemic

Globally, first-line TB treatment success stands at 83 percent, according to a new report by STOP TB Partnership. The research indicates declining success rates over the past two years.

That downward trajectory is fuelling a sense of urgency to improve patient adherence to Directly Observed Therapy, WHO's recommended protocol for six to nine months after infection. DOT involves diagnosis by sputum-smear microscopy and medication given under direct observation and supervision by health care workers to ensure drugs are taken at the right time. But this means it is resource intensive and expensive, making its implementation in low-resource settings difficult.

Health care workers may soon be able to remotely monitor their patients for treatment adherence. Wirelessly Observed Therapy is a device developed by Proteus Digital Health that consists of an edible ingestion sensor and an external wearable patch, which, when paired with a mobile device, can detect and record when patients take their medicine.

When patients take their pills, the ingestion event is recorded and uploaded to a secure internet server, so health care workers can remotely confirm that pills were taken. The ingestions can be followed in real time and there's no limit to the number of patients health care workers can monitor.

In addition to allowing remote monitoring, digitizing could improve accuracy, preventing unnecessary changes in therapy such as stopping certain drugs or switching to other ones.

Researchers think WOT has the potential to replace DOT.

"The implications for the developing world are really enormous ... because they lack adequate public health infrastructure and medical personnel," Sara Browne, professor of clinical medicine at the University of California who has been involved in a study analyzing the effectiveness and accuracy of WOT, told Devex.

DOT is "really difficult to run. We've got new drugs, but for successful treatment, we need treatment monitoring and adherence support. This is putting us in a whole new world."

Browne is now working with experts to analyze the global cost of rolling out such a device and is hoping to begin larger clinical trials in South Africa soon.

Oral swabs

The standard diagnostic test for TB involves patients coughing up sputum, which is difficult to collect, analyze, and handle. It's also often unreliable.

Researchers have now found that oral swabbing — that is, taking a sample from inside the mouth with a glorified Q-tip — is a safe and easy alternative to sputum collection for TB diagnosis.

"We never set out to have this be a total replacement for sputum collection, but now we think it's possible. We think it will replace sputum," said Gerard Cangelosi, adjunct professor of global health at the University of Washington, who has been investigating the use of oral swabs for TB diagnosis.

Cangelosi believes the oral swab could have huge implications for high-burden TB countries such as India and China, where there's a push for active case finding.

"We could be going out to communities and finding TB cases before people even know they have it. It could reduce the transmission and burden of TB," he said. "If you have a classroom, a workplace, or a family exposed to TB, you can't go and collect sputum from them, but you can collect samples using oral swabs. Imagine that you can use oral swabs and sample an entire classroom of children in a few minutes."

The oral swab has only been tested on a small number of patients but is currently being trialled in about 150 patients in South Africa.

While it will remove the need for using sputum, the swab will still need to be analyzed using either a GeneXpert machine or PCR assay.

Rapid blood test

The lack of a reliable and efficient blood diagnostic tool is one of the major obstacles reaching the global TB goals. A rapid, non-sputum based test that can rapidly screen for active TB is considered to be one of the field's most pressing needs.

A new blood prototype test, which takes less than 15 minutes to run, is showing promising results.

Researchers from France have developed a blood test that doesn't require power or health care worker training, which can be used outside of health care facilities anywhere in the world. The test only needs a few drops of blood, placed on the device. Results appear within 15 minutes.

"Everybody could use the test, even people without medical training, and maybe even the patient as well," said Pierre-Alain Rubbo, president of Omunis, a company that develops new blood diagnostic tools for infectious diseases and which developed this TB test.

"It will be as easy as a pregnancy test, but with blood samples. It has the potential to become the gold-standard for large-scale tuberculosis screening, as similar tests are the gold standards for other diseases like HIV or hepatitis."

Rubbo said the next step was for the prototype test to be evaluated in larger numbers of samples, including patients who are also HIV-positive. He said his team is currently evaluating the test using samples from the Foundation for Innovative New Diagnostics.

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